DOCUMENT RESUME

ED 243 801 SO 015 663

TITLE	Shaping a Nation: The Role of the Livestock & Meat Industry in History & Economics [Teacher's Guides and Activity Masters].
INSTITUTION	National Live Stock and Meat Board, Chicago, IL. Education Dept.
PUB DATE	Apr 84
NOTE	53p.; Project coordinated by the Illinois Council on Economic Education and developed with a special grant from the National Live Stock Producers Association. Reproductions of filmstrip frames may not reproduce clearly. Filmstrip, cassette, and poster available from the National Live Stock and Meat Board.
AVAILABLE FROM	National Live Stock and Meat Board, 444 North Michigan Avenue, Chicago, IL 60611.
PUB TYPE	Guides - Classroom Use - Guides (For Teachers) (052)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Agribusiness; Agricultural Education; *Agricultural Production; Animal Husbandry; Audiovisual Aids; Economics; Farm Management; Instructional Materials; Intermediate Grades; Learning Activities; Livestock; Marketing; *Meat Packing Industry; United States History

ABSTRACT

Recommended for use with students in grades 4-6, this audiovisual kit focuses on the role of the livestock industry in history and economics. A brief historical survey of the origin of cattle and hogs in the United States relates the livestock industry to the growth and expansion of the country. A look at two modern livestock operations introduces students to three key economic concepts: factors of production, the market system, and specialization. Although the kit is intended to be used with filmstrips and cassettes, complete narration and black-and-white reproductions of all frames in the filmstrips are included in the first of four teachers' guides. Also included are a bibliography, glossary, and film pre- and postviewing activities. Each of the other guides treats one of the three concepts (production, marketing, and specialization) in depth and includes student objectives, activity ideas, extension activities, corresponding activity masters, and answer keys. (LH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED243801

SHAPING A NATION

The Role of the Livestock & Meat Industry in History & Economics

Audio Visual Kit Containing:

- Two Filmstrips
- Two Cassettes
- Partners in Production Poster
- Teacher's Guide 1
- Teacher's Guide 2
- Teacher's Guide 3
- Teacher's Guide 4
- Fourteen Activity Masters

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

X Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Sponsor:
NATIONAL LIVE STOCK PRODUCERS ASSOCIATION

Project Coordinator:
ILLINOIS COUNCIL ON ECONOMIC EDUCATION

Producer:
EDUCATION DEPARTMENT
NATIONAL LIVE STOCK AND MEAT BOARD
444 North Michigan Avenue
Chicago, Illinois 60611
(312) 467-5520

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Barbara M. Hicks
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SO 015 663

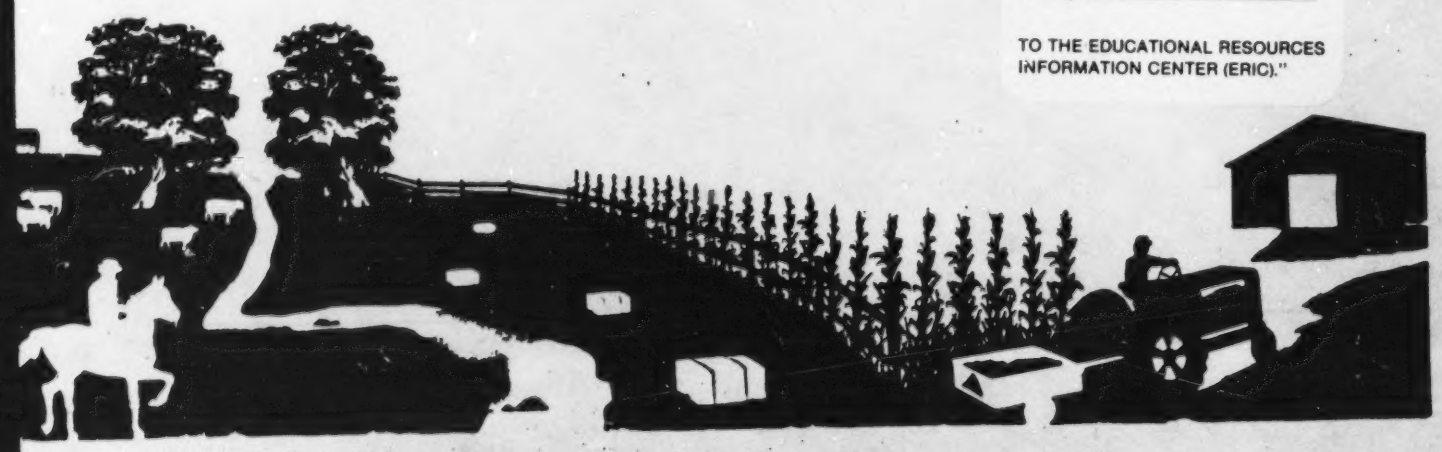


TABLE OF CONTENTS

* ■ **FILMSTRIP, PART I:**
Color, 68 frames.
* ■ **FILMSTRIP, PART II:**
Color, 61 frames.
* ■ **CASSETTE, PART I:**
11 minutes; side one pulsed for automatic advance with Dukane filmstrip projectors; side 2 has audible beep for manual advance.
* ■ **CASSETTE, PART II:**
10½ minutes; side one pulsed for automatic advance with Dukane filmstrip projectors; side 2 has audible beep for manual advance.
* ■ **POSTER**
PARTNERS IN PRODUCTION
(24" x 36"); full-color photographs provide several examples of the four factors of production and depict a variety of occupations related to farming and ranching (7 career clusters represented); poster recommended for several activities suggested in teacher's guide.
■ **TEACHER'S GUIDE 1**
COMPREHENSIVE GUIDE TO THE KIT: SHAPING A NATION
Provides overview of the kit and includes suggestions for previewing and post-viewing activities related to the filmstrip; contains complete narration and black and white reproductions of all frames in the filmstrip (pages 9-16) to enable easy previewing.
■ **TEACHER'S GUIDE 2**
FOUR FACTORS OF PRODUCTION
Provides a choice of two major activity ideas for teaching about factors of production and several extension activities; also has background information on economic concepts.
■ **TEACHER'S GUIDE 3**
MARKETS
Provides a choice of two major activities for teaching about markets and several extension activities; also has background information on economic concepts.
■ **TEACHER'S GUIDE 4**
SPECIALIZATION
Provides a choice of two major activity ideas for teaching about specialization (regional and occupational) and several extension activities; also has background information on economic concepts.
■ **ACTIVITY MASTERS**
A-1 VOCABULARY
B-1 WORD SEARCH PUZZLE
C-1 EVALUATION SHEET
D-2 FACTORS OF PRODUCTION
E-2 PROFIT OR LOSS?
F-2 PROFIT OR LOSS SITUATIONS
G-2 MAKING A GRAPH
H-2 EVALUATION SHEET
I-3 MARKETS IN THE PRODUCTION OF MEAT
J-3 TRANSACTION CARDS
K-3 EVALUATION SHEET
L-4 JIM'S JOURNEY
M-4 U.S. MAP
N-4 EVALUATION SHEET

Note: the number in the code (i.e., 1, 2, 3, or 4) indicates the corresponding teacher's guide with which the activity master is used.

* NOTE: FILMSTRIP, PART 1, FILMSTRIP, PART II, CASSETTE, PART I, CASSETTE, PART II, AND PARTNERS IN PRODUCTION POSTER ARE AVAILABLE FROM THE NATIONAL LIVE STOCK AND MEAT BOARD, 444 North Michigan Avenue, Chicago IL 60611 (313) 467-5520.

"PERMISSION TO REPRODUCE THIS MATERIAL
HAS BEEN GRANTED BY

The National Live Stock and Meat Board

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

TEACHER'S GUIDE

1

Comprehensive Guide to the Kit:

SHAPING A NATION

The Role of the Livestock & Meat Industry in History & Economics

This guide also contains:
Bibliography
Glossary
Pre and Postviewing activities
Reproduction of filmstrip frames and narration

CONTENTS

Acknowledgements	1
Overall Kit Approach	2
Suggested Sequence	2
Filmstrip Summary	2
Student Objectives	3
Filmstrip Previewing Activities	3
Filmstrip Postviewing Activities	4
Extension Activities	5
Answers to Activity and Evaluation Sheets	7
Supplementary Materials on History and Economics, Factors of Production, Markets, and Specialization	7
Filmstrip Script	9
Glossary	17

KIT MATERIALS

■ **FILMSTRIP, PART I:**
Color, 68 frames.

■ **FILMSTRIP, PART II:**
Color, 61 frames.

■ **CASSETTE, PART I:**
11 minutes; side one pulsed for automatic advance with Dukane filmstrip projectors; side 2 has audible beep for manual advance.

■ **CASSETTE, PART II:**
10½ minutes; side one pulsed for automatic advance with Dukane filmstrip projectors; side 2 has audible beep for manual advance.

■ **POSTER**
PARTNERS IN PRODUCTION
(24" x 36"); full-color photographs provide several examples of the four factors of production and depict a variety of occupations related to farming and ranching (7 career clusters represented); poster recommended for several activities suggested in teacher's guide.

■ **TEACHER'S GUIDE 1**
COMPREHENSIVE GUIDE TO THE KIT: SHAPING A NATION
Provides overview of the kit and includes suggestions for previewing and postviewing activities related to the filmstrip; contains complete narration and black and white reproductions of all frames in the filmstrip (pages 9-16) to enable easy previewing.

■ **TEACHER'S GUIDE 2**
FOUR FACTORS OF PRODUCTION
Provides a choice of two major activity ideas for teaching about factors of production and several extension activities; also has background information on economic concepts.

■ **TEACHER'S GUIDE 3**
MARKETS
Provides a choice of two major activities for teaching about markets and several extension activities; also has background information on economic concepts.

■ **TEACHER'S GUIDE 4**
SPECIALIZATION
Provides a choice of two major activity ideas for teaching about specialization (regional and occupational) and several extension activities; also has background information on economic concepts.

■ **ACTIVITY MASTERS**

A-1 VOCABULARY
B-1 WORD SEARCH PUZZLE
C-1 EVALUATION SHEET
D-2 FACTORS OF PRODUCTION
E-2 PROFIT OR LOSS?
F-2 PROFIT OR LOSS SITUATIONS
G-2 MAKING A GRAPH
H-2 EVALUATION SHEET
I-3 MARKETS IN THE PRODUCTION OF MEAT
J-3 TRANSACTION CARDS
K-3 EVALUATION SHEET
L-4 JIM'S JOURNEY
M-4 U.S. MAP
N-4 EVALUATION SHEET

Note: the number in the code (i.e., 1, 2, 3, or 4) indicates the corresponding teacher's guide with which the activity master is used.

ACKNOWLEDGEMENTS

We would like to express our appreciation to the following people who helped in the many phases of development for *SHAPING A NATION.*

A special thanks to John and Clara Cargile of San Angelo, Texas and Don and Karen Gingerich of Parnell, Iowa for their time and gracious assistance during the photography and recording of their livestock operations.

ADVISORY COMMITTEE

Academic

Ed Brown, Elgin Community College (Illinois)

Philip Besonen, Ed.D., University of Arkansas

Michael Hartoonian, Ph.D., Wisconsin Department of Public Instruction

Mary Nalbandian, Chicago Public Schools, (Illinois)

Joe Rueff, Elkhart Schools (Indiana)

Peter R. Senn, Ph.D., Wilbur Wright College (Illinois)

William Stepien, Dundee Schools (Illinois)

S. Stowell Symmes, Joint Council on Economic Education (New York)

Joe Townsend, Ph.D., Illinois State University

Industry

Nancy Degner, Iowa Beef Industry Council

Lois Jean Hartmann, American National CowBelles

Darrell Hipes, National Live Stock Producers Association

Marjorie Ocheltree, National Pork Producers Council

Jeanne Pittman, National Porkettes

FILMSTRIP NARRATION REVIEWERS

Agricultural Economists

G. A. Futrell, Ph.D., Iowa State University

Glenn Grimes, University of Missouri

Patrick Luby, Ph.D., Oscar Mayer Foods Corp.

Allan Mueller, Ph.D., University of Illinois

Wayne Purcell, Ph.D., Virginia Polytechnic Institute & State University

B. D. VanStavern, Ph.D., Ohio State University

Ewen Wilson, Ph.D., American Meat Institute

Agriculture and Animal Science Specialists/Agricultural Educators

Robert Bray, Ph.D., University of Wisconsin

Jim Gulinger, Sycamore High School (Illinois)

Len Harzman, Ph.D., Western Illinois University

Sally Katt, USDA, Washington, D.C.

Dale Law, University of Illinois

Robert A. Martin, Ph.D., Iowa State University

Larry Miller, Ohio State University

Fred Oomens, University of Wisconsin—Platteville

Edgar Persons, University of Minnesota

Thomas Ringkob, Ph.D., University of Nevada

Wayne Rasmussen, Ph.D., USDA, Washington, D.C.

Orion Samuelson, WGN T.V., Chicago, Illinois

David E. Schafer, Ph.D., Kansas State University

Michael Spangler, Iowa State University

Bob R. Stewart, Ph.D., U. of Missouri—Columbia

B. D. Van Stavern, Ph.D., Ohio State University

State Beef Industry Organization Representatives

Patricia Adrian, South Dakota

Jane Anderson, California

Garland M. Bastin, Kentucky

Mary Jo Feeney, California

Wendy Anne Little, Illinois

Rich McKee, Kansas

Steve McKinley, Oklahoma

Suzanne Craig, Idaho

Walter Watts, Wisconsin

Bonnie West, Colorado

Lowell L. Wilson, Ph.D., Pennsylvania

ACTIVITY WRITERS

Kristi Aldridge, Lundahl School, Crystal Lake, IL

Gorann Leekley, DeKalb School, DeKalb, IL

Steve Renne, Meadowdale School, Carpentersville, IL

Mary Smoot, Neubert School, Algonquin, IL

Jean Veri, Lyndon Center, Vermont

FIELD TEST COORDINATORS

James Charkins, Ph.D., Director, Center for Economic Education, San Bernardino, CA

Dave Hillmer, Vice Principal, Sycamore, IL

Carolyn Holleran, Economics Education Specialist, Reading, PA

Ron Mayhew, Curriculum Director, Alton, IL

Michael Oldfather, Ph.D., Executive Director, Kansas Council on Economic Education, Manhattan, KS

Bill Stepien, Instructional Coordinator for Social Studies, Dundee, IL

FIELD TEST TEACHERS

Sue Anderson, Southeast School, Sycamore, IL

Gayle Braffett, Southeast School, Sycamore, IL

William Eagleton, East Middle School, Godfrey, IL

Susan Flynn Hay, Morgan School, Rialto, CA

James Kihl, Prussing School, Chicago, IL

Christine C. Kiss, Alsace School, Reading, PA

Steve Renne, Meadowdale School, Carpentersville, IL

Wendy Sibery, Sleepy Hollow School, Sycamore, IL

Bruce Surgeoner, Alsace School, Reading, PA

Daniel P. Thomas, Joseph DeMello School, South Dartsmouth, MA

PROJECT COORDINATOR AND TEACHER'S GUIDE EDITOR

John L. Lewis, Ph.D., Illinois Council on Economic Education

FILMSTRIP AND TEACHER'S GUIDE AUTHOR

Susan Dye Lee, Ph.D., Northwestern University (IL)

FILMSTRIP PRODUCER AND PHOTOGRAPHER

Robert Frerck, Odyssey Productions, Chicago

OVERALL KIT APPROACH

The materials and activities in this kit are recommended for use with 5th grade students (primarily because of the U.S. history orientation in Part I of the filmstrip). The level of difficulty would also be appropriate for advanced fourth graders and beginning (or less advanced) 6th grade students.

The major part of the filmstrip covers three basic economic concepts: (1) factors of production, (2) the market system and (3) specialization. The production of livestock and meat is used in the filmstrip to show the application of these concepts.

SHAPING A NATION begins with a brief historical survey of the origins of cattle and hogs in the U.S. and relates the livestock industry to the growth and expansion of the country. A look at two modern livestock operations introduces students to the three previously-mentioned key economic concepts.

The filmstrip concludes with an examination of the concept of specialization as it relates to regions of the country and to careers. In this section, students learn how regions of the country are interdependent in bringing food to the consumer.

By following the entire production process for a given product, students gain insight into farming as a business and into related economic principles.

Four teacher's guides accompany the two-part filmstrip. The comprehensive guide includes pre- and postviewing activities for reinforcing both the historical concepts and the three basic economic concepts, black and white reproductions of the filmstrip frames with printed narration and also a glossary.

Each of three other guides treats one of the three concepts (factors of production, markets or specialization) in depth and includes activity masters for the teacher.

The full-color wall poster can be utilized with several of the recommended activities.

SUGGESTED SEQUENCE

- Use reproduction of filmstrip on pages 9-16 of this guide to familiarize yourself with the content.
- Carry out one or more previewing activities from page 3.
- Show part I of the filmstrip.
- Discuss part I and conduct one or more postviewing activities on page 4.
- Show part II.
- Discuss part II and use one or more postviewing activities on page 4.
- Select one or more extension activities from pages 5-6.

Optional

- Select one or more of the shorter teacher's guides (2, 3 or 4) and use one of the two major lessons.
- Follow up the major lesson with one or more extension activities.

FILMSTRIP SUMMARY

This filmstrip covers three basic economic concepts: factors of production, markets and specialization, using the meat industry as the focus. It begins with a brief historical survey of the origins of cattle and hogs in the United States and relates the livestock industry to the growth and expansion of the country.

A look at two modern livestock operations introduces students to the three basic economic concepts indicated above. It also introduces students to the decisions farmers must make and the resources they must organize to make farming or ranching a profitable business. The filmstrip then follows the second stage of production, which includes packing and processing. The third stage of production is retailing, the market which links the retailer to the consumer.

In conclusion, the filmstrip examines specialization as it relates to regions of the country and careers. Students will also learn how regions of the country are interdependent in bringing goods to the consumer. By following an entire production process (in this case, of meat), students will gain insight into farming as a business and into related basic economic principles.

STUDENT OBJECTIVES

FOR GUIDE 1

The learner will be able to:

- name the four factors of production.
- outline the stages of production as a food goes from the farm to the table.
- describe a market as any place where buyers and sellers exchange goods and services.
- explain why profit is an incentive for people to take economic risks.
- name one job from each step in the stages of production.
- identify major regions of the country where livestock are raised.
- recall two historical developments related to the U.S. livestock industry.

FILMSTRIP PREVIEWING ACTIVITIES

The activities serve as a general review and reinforcement of the basic concepts presented in the filmstrip and are designed to be used in a variety of content areas. Some of the ideas will provide practice in skill development. Although a variety of activities are presented, use of only a few would meet the objectives of this unit.

INTRODUCING THE FILMSTRIP

Recommended

Explain to the students that they are going to see a filmstrip dealing with the economics of farming and ranching with a focus on meat production. Ask students to share what they already know about raising beef, pork and lamb. What do they know about ranching? What have they learned about farming in social studies or American history courses? What are some things they would like to know? Write their questions on the chalkboard. Ask them to watch for the answers to their questions during the filmstrip presentation.

INTRODUCING NEW WORDS

Recommended

Introduce **VOCABULARY/A-1.** All terms will be used in the filmstrip narration. Familiarity with these words will enhance student understanding and learning.

COMPLETING A WORD PUZZLE

As homework, assign the **WORD SEARCH PUZZLE/B-1.** Students will be reacquainted with vocabulary and given practice in categorizing resources under the four factors of production. Answers are provided on page 7 of this guide.

PRETESTING

Recommended

Determine what students already know about the content, using **EVALUATION SHEET/C-1.** Answers are found on page 7 of this guide.

USING A WORLD MAP

To help students recognize the importance of animals to human welfare, ask students to name and tell the use of some animals that are bred in the U.S.

Using a world map or globe, ask students to take turns pointing out a section of the world and identifying an animal of that locale. Ask them to name the use of each animal and explain why each is well adapted to its environment. Examples are reindeer (Lapland), water buffalo (Asia), llama and alpaca (South America), camel (Near East, North Africa) and elephant (India), as well as the more familiar cow, pig, sheep, goat, horse, ox and donkey. Have class summarize how people use animals and their by-products for food, clothing, transportation and recreation.

LOCATING THE ORIGINS OF THE AMERICAN DIET

Ask students to tell what they had as a main dish for last night's dinner. List their responses on the chalkboard and have students classify their answers as to beef, pork, lamb, chicken, fish or other. Using a United States map, conclude this activity by asking students to show where in the nation these animals are found. If they aren't sure, ask the students to make an educated guess and explain why they chose that area as the source of their dinner entree.

FILMSTRIP POSTVIEWING ACTIVITIES

FOR PART I

REVIEWING THE FILMSTRIP
Recommended
Show selected frames of the filmstrip again without sound. Let the students take turns providing the missing narrative by summarizing the information illustrated in the visual, using their own words. Be sure everyone contributes at least once.

REVIEWING STUDENTS' QUESTIONS
Review questions written on chalkboard (from previewing activity). If they were not answered in the filmstrip, assign students to research the answers.

REVIEWING SPANISH ORIGINS OF BEEF
Show frames 3 to 11 again. (Refer to page 9.) With each frame, ask students to identify evidence of the Spanish influence in riding, herding and raising livestock. Using frames 49 through 65 (pages 12-13), discuss the influences which have persisted to the present day.

REVIEWING THE FACTORS OF PRODUCTION
Without using the sound, show frames 49 through 66. (Refer to pages 12-13.) Ask the students to choose an item from each frame and tell whether it is an example of land resources, labor resources, capital resources or management ability (the person who manages these resources for profit). List the examples on the chalkboard. Conclude the review at frame 47, which illustrates the four factors.

FILMSTRIP POSTVIEWING ACTIVITIES

FOR PART II

USING NEW WORDS
Distribute follow-up activity **VOCABULARY/A-1.** Have students do the second part of this activity as a further review of new words used in the filmstrip.

FINDING SIMILARITIES AND DIFFERENCES
Discuss the ways in which the two producers (the cattle/sheep rancher and the corn/hog farmer) are alike and different, e.g., similarities: they both like to be around animals, they both take risks, they both spend much of their time taking care of their animals; differences: the type of land they use, their daily routine of activities, etc.

REVIEWING THE STEPS IN THE STAGES OF PRODUCTION
Write the words "producer, packer, retailer and consumer" on the chalkboard. Review the function of each as meat goes through the production stages. Ask student to choose one step in the stages of production and write a "Who Am I?" sentence describing something that the person does in their work. For example, a student who chooses to describe a producer might write, "I raise pigs." Take turns having students identify in which category of production each sentence fits.

REVIEWING THE CONCEPT OF PROFIT
Discuss why the farmer needs to make a profit. (Profit is payment for the management skills of the farmer. If a profit is not made, the farmer will have to leave farming and apply his or her management skills to another occupation.) Discuss what the farmer, the processor and the retailer may do with their profit. Conclude by asking the class why the expectation of profit is an important incentive in doing a job. Why is it a vital feature of our economic system that profits are a built-in part of these market exchanges? Ask if they can think of any business situation in which the seller should not make a profit. (A further discussion of profit can be found in Teacher's Guide 2: The Four Factors of Production.)

REVIEWING THE MARKET SYSTEM
Without using the sound, show students frames 74, 85, 93, 94, 102 and 106, which illustrate a market situation. (Refer to pages 13-15.) Ask the students to identify whether the market is occurring between the producer and a supplier, the producer and processor (packer), the processor (packer) and retailer or the retailer and consumer. In each situation, who is doing the selling? What is being exchanged in each situation?

FILMSTRIP POSTVIEWING ACTIVITIES
CONTINUED

Who is buying? How is the price being determined in each situation? Be sure students understand that, as meat goes through the production process from one market to another, additional costs are incurred. Ask why the cost of providing services at each stage of production includes profit. (A profit is necessary for the producer, processor and retailer to stay in business. Profit is the payment to the business person for his or her managerial skills and risk taking.)

REVIEWING RETAIL MARKETS

Give the students three minutes to see who can write the longest list of all the market situations in which they engage. Some examples to get them started might include: the school cafeteria, a fast-food restaurant, a grocery store, a record shop, a city bus. When the time is up, have students share their lists. Conclude by asking the class to circle the items on their lists which might include meat. Students should name grocery stores, restaurants, schools and hospitals as examples of situations in which retail meat is bought or sold in one form or another.

REVIEWING LIVESTOCK REGIONS AND STATES

Write the words cattle, hogs and sheep on the chalkboard. Ask students to list two or three states which are large producers of each animal. Review frames 109, 111, and 114 to find out if each list is accurate. (Refer to pages 15-16.) Assign students to find out which, if any, of these animals are raised in their own state and locale.

Without using the sound, look again at frames 109, 111 and 114. Ask students to identify the major geographical regions where sheep, cattle and pigs are produced. What geographic features characterize each one of these regions? Use a wall map showing physical characteristics of the United States. What do livestock-producing states have in common? What regions of the country are not suitable for producing livestock? Discuss the reasons why. You may want to conclude this activity by having several exceptional students hypothesize about the areas in Canada and Mexico where livestock production is centered. For homework, have students find out whether or not their hypotheses about Canada and Mexico were accurate.

POSTTESTING

Recommended

Determine what students have learned using **EVALUATION SHEET/C-1.** This sheet was used previously as a pretest. Answers are found on page 7 of this guide.

EXTENSION ACTIVITIES

MAKING MAPS

Distribute **U.S. MAP/M-4.** Students are to indicate on their maps the cattle trails and railroad centers that helped make meat production a nationwide industry after the Civil War. Assign one of the following trails to each student: Chisholm, Shawnee, Sedalia, Eastern, Western, Texas, Bozeman, Jones and Plummer, Goodnight-Loving, National, Potter and Bacon. Also assign railroad centers: Wichita, St. Louis, Sedalia, Abilene, Dodge City, San Antonio, Fort Worth, Deadwood, Fort Laramie. Other cities and railroad lines may also be included. (See resources for suggested references.) After the maps have been completed, students might be assigned to give brief reports on the most important trails. Maps and reports can be used for classroom display. Conclude by discussing the importance of the railroad and why a national transportation network would be instrumental in the development of any national industry.

STUDYING THE ORIGINS OF WORDS

To reinforce English skills, ask students to find the origin of the following words and expressions: rodeo, vaquero, chaps, lasso, spurs, reata, merino, dogie, ranchero, cowboy, drover, six-shooter, chuck wagon, maverick, Uncle Sam and "the real McCoy." Review answers and have students use each of these words in a sentence. (The *Cowboy Encyclopedia* is a good source.)

EXTENSION ACTIVITIES
CONTINUED

MAKING A POSTER

Give the students a week to research and complete this activity. Ask them to make a poster showing one of the following:

- A cowboy, c. 1880, dressed in typical work garb. Items of clothing and gear should be labeled and the student should know the function of each item in the illustration. (References: books by Fay F. Ward and Mary B. Christian.)
- Different breeds of cattle, hogs and sheep in the 1800's and today.
- A diagram illustrating four or more of the different ways food was preserved during the colonial period. The student should be able to explain how each method worked. (References: books by Lila Perl.)
- An illustration of some typical dishes eaten by colonists showing regional differences in diet. The student should be able to explain why certain dishes predominated in certain areas.

Display the posters and allow a day for students to show their posters and give a brief explanation of their findings.

WRITING AN ESSAY

Ask students to choose an invention that helped improve the meat or agriculture industry, e.g., the refrigerated railroad car, the sausage stuffer, the reaper, the steel plow, the fence-line feeder, insulated rooms or mechanical slicing machines. Ask students to write two paragraphs: one explaining the important details about the invention of their choice and a second discussing the major consequences of the discovery on farming or on the food industry. Each essay should also include a picture illustrating the invention or a model made by the student. Students might ask grandparents or friends for old items or pictures of old equipment for a display. Conclude this activity by holding a "Progress in Agriculture" day in which students share their research and display their materials.

REPORTING ON LIVESTOCK USE IN AMERICA'S PAST

Divide the class into four groups to study our nation's historical uses of livestock. Each group should plan its own project demonstrating: (1) how an antebellum Southerner used hogs, (2) how the Indians used buffalo, (3) how a colonial Pennsylvanian used cows, (4) how a nineteenth century herder used sheep. Students may use whatever ideas they wish in executing their project: a short drama, poetry reading, illustrations on an overhead projector, reports, music, a mock radio interview of historical personages, a mural, a diorama, models, etc. You may want to refer students to the books listed on page 7 of this guide to begin their research. Allow several class periods for the groups to present their findings.

DOING RESEARCH

Have students interested in the history of agricultural development in the West read some of the sources listed in the bibliography. Assign reports on such topics as the windmill and barbed wire, Nat Love and George McJunkin (black cowboys), William F. Cody and Otto Franc (ranchers), John Deere or Cyrus McCormick (inventors). You may also want to include reports on the origins of folk music with some short musical presentations or poetry and ballad readings. Suggested recordings:

"Country Music: South and West." New World Records, NW287.
Ives, Burl. "The Best of Burl Ives." MCA Records, MCA2-4034.
Piller, Ruth Roberts. "Cowboys and Indians." RCA-Camden, CAL 1094.
Wills, Bob. "The Best of Bob Wills." MCA2-4092.

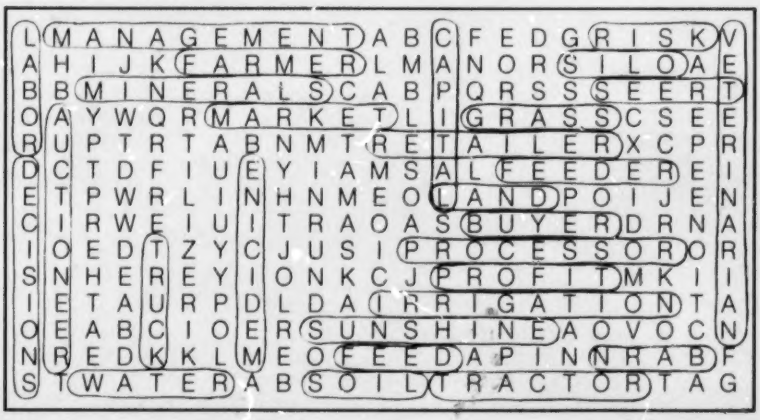
ANSWERS TO ACTIVITY AND EVALUATION SHEETS

WORD SEARCH PUZZLE/B-1

1. Under land: water, soil, trees, minerals, grass, sunshine
2. Under labor: feeder, veterinarian, auctioneer, buyer, processor, retailer
3. Under capital: barn, silo, tractor, feed, medicine, truck, irrigation
4. Under management: farmer, decisions, risk, profit, market

EVALUATION SHEET/C-1

1. T	6. T
2. T	7. b
3. F	8. c
4. F	9. a
5. T	10. b


L M A N A G E M E N T A B C F E D G R I S K V
A H I J K F A R M E R L M A N O R S I L O A E
B B M I N E R A L S C A B P Q R S S S E E R T
O A Y W Q R M A R K E T L I G R A S S C S E E
R U P T R T A B N M T R E T A I L E R X C P R
D C T D F I U E Y I A M S A L F E E D E R E I
E T P W R L I N H N M E O L A N D P O I J E N
C I R W E I U I T R A O A S B U Y E R D R N A
I O E D T Z Y C J U S I P R O C E S S O R O R
S N H E R E Y I O N K C J P R O F I T M K I I
I E T A U R P D L D A I R R I G A T I O N T A
O E A B C I O E R S U N S H I N E A O V O C N
N R E D K K L M E O F E E D A P I N N R A B F
S T W A T E R A B S O I L T R A C T O R T A G

SUPPLEMENTARY MATERIALS

FOR TEACHER'S GUIDE 1 COMPREHENSIVE GUIDE TO THE KIT: SHAPING A NATION

Teacher's Reference Books

Burlingame, Roger.
March of the Iron Men: A Social History of Union Through Invention. New York: Grosset & Dunlap, 1938.

Christian, Mary Blount.
Hats Are For Watering Horses. C. R. McNally, 1976.

Durham, Philip; and Jones, Everett L.
The Negro Cowboys. New York: Dodd, Meade, 1965.

Lavender, David.
The Great West. New York: American Heritage, 1965.

McCraken, Harold.
The American Cowboy. Garden City: Doubleday, 1973.

McDowell, Bart, ed.
The American Cowboy in Life and Legend. Washington: National Geographic Society, 1972.

Student Books

Felton, Harold.
Nat Love: Negro Cowboy. New York: Dodd, Meade, 1969.

Grant, Bruce.
The Cowboy Enclyclopedia. New York: Rand McNally, 1951.

Mier, Earl Schenck.
Wild & Wooly West. Chicago: Rand McNally, 1964.

Perl, Lila.
Hunter's Stew and Hangtown Fry: What Pioneer Americans Ate and Why. New York: Seaburg Press, 1977.

Place, Marian T.
American Cattle Trails: East & West. New York: Holt, Rinehart and Winston, 1967.

Rounds, Glen.
The Cowboy Trade. New York: Holiday House, 1972.

Seidman, Laurence Ivan.
One In The Saddle: The Cowboy's Frontier, 1866-1896. New York: Alfred A. Knopf, 1973.

Ward, Don.
Cowboys and Cattle Country. New York: American Heritage, 1961.

Teaching Aids/Pamphlets

Agriculture and Society (filmstrip kit series). $173.25 From: Career Aids, Inc., 8950 Lurline Avenue, Chatsworth, CA 91311. (Note: Series includes five audio filmstrips relating agriculture to 1) the U.S., 2) U.S. history, 3) U.S. regions, 4) the world and 5) the future.

The Big Brown Bag: Economics of the American Food System (activity master program). $3.50. From: Food Marketing Institute, 1750 K St. N.W., Washington, D.C. 20006.

Food for America (slide/tape presentation). $40.00 for two-day rental. From: Food Marketing Institute (see above).

From the Earth to Your Table (activity master program). Free. From: Office of Communication, U.S.D.A., Washington, D.C. 20006.

FOR TEACHER'S GUIDE 2 FACTORS OF PRODUCTION

Teacher's Reference Book

Thomas, Robert B.
The Old Farmer's Almanac. Dublin, New Hampshire: Yankee Publishing, Inc., 1983.

Student Books

Davis, P. D. C. and A. A. Dent.
Animals That Changed the World. New York: Crowell Collier, 1968.

Froman, Robert.
Our Fellow Immigrants. New York: McKay, 1965.

Gemming, Elizabeth.
Born In A Barn: Farm Animals and Their Young. New York: Coward, McCann & Geoghegan, 1974.

Goldin, Agusta.
Grass: *The Everything, Everywhere Plant.* New York: Thomas Nelson, 1977.

Lent, Henry B.
Agriculture U.S.A. New York: E. P. Dutton, 1968.

Roth, Charles E.
The Farm Book. New York: Harper & Row, 1975.

Sande, Lenore.
Animals That Work For Man. Englewood Cliffs, New Jersey: Prentice Hall, 1963.

Scott, Jack D.
The Book of the Pig. New York: Putnam's, 1981.

Thomson, Ruth.
Understanding Farm Animals. Burlington, Ontario: Hayes Publishing, 1978.

Teaching Aids/Pamphlets

The Fabulous Food Machine (filmstrip kit). $30.00. From: Illinois Farm Bureau, 1701 Towanda Avenue, Bloomington, IL 61701.

The Farming Game (game). $17.95. From: Fox Marketing, 611 N. McLean, Bloomington, IL 61701.

Food From Farm to You (16mm film). Free Loan. From: Grange Farm Film Foundation, 1616 H. St. N.W., Washington, D.C. 20006.

The Great American Farm (activity master program). Free. From: The Great American Farm, Box 385, Vandalia, OH 45377.

FOR TEACHER'S GUIDE 3 MARKETS

Student Books

Ashbrook, Frank.
Butchering, Processing, and Preservation of Meat. New York: Van Nostrand, 1955.

Buehr, Walter.
Meat From Ranch To Table. New York: William Morrow and Company, 1971.

Chadwick, Lee.
Seeds of Plenty. Agriculture in the Scientific Age. New York: Coward-McCann, Inc., 1969.

Hemphill, Josephine.
Fruitcake and Arsenic. Boston: Little, Brown and Company, 1962.

Limburg, Peter R.
The Story of Corn. New York: Julian Messner, 1971.

Lobel, Leon.
All About Meat. New York: Harcourt Brace Javanovich, 1975.

Uhl, Melvin.
About Grasses, Grains, and Canes. Chicago: Melmont Publishing, Inc., 1964.

Wood, James P.
This Little Pig. The Story of Marketing. New York: Thomas Nelson, Inc., 1971.

Teaching Aids/Pamphlets

Leaflets on grain. Single copies free. From: Minneapolis Grain Exchange, 150 Grain Exchange Bldg., Minneapolis, MN 55415.

Leaflets on U.S.D.A. Food Safety and Quality Service. Free. From: Food Safety and Quality Service, U.S.D.A., Washington, D.C. 20250.

The Auctioneer. Sample copy free. From: National Auctioneers Association, 135 Lakewood Dr., Lincoln, NE 68510.

Booklets on marketing. Single copies free. From: Literature Services Department, The Chicago Board of Trade, LaSalle at Jackson, Chicago, IL 60604.

FOR TEACHER'S GUIDE 4 SPECIALIZATION

Teacher's Reference Books

Gurney, Gene, and Clare Gurney.
Agriculture Careers. New York: Franklin Watts, 1978.

Olesky, Walter.
Careers in the Animal Kingdom. New York: Julian Messne, 1980.

Peck, Leiland, B., et. al.
Focus on Food. New York: McGraw Hill, 1974.

Student Books

Orr, John Boyd.
The Wonderful World of Food New York: McGraw Hill, 1974.

Teaching Aids/Pamphlets

Career Opportunities in the Meat Packing Industry. Single copy free. From: Public Relations Department, American Meat Institute, P.O. Box 3556, Washington, D.C., 20007.

Facts About Some Jobs in Agriculture. There's A New Challenge in Agriculture. Careers in the Food Industry. All three free. Send self-addressed envelope with request. From: Training Director, American Farm Bureau Federation, 225 Touhy Avenue, Park Ridge, IL 60068.

People on the Farm (series of student booklets with teacher's guides). Up to 50 booklets free. From: People on the Farm, Room 535 A., Office of Governmental and Public Affairs, U.S.D.A., Washington, D.C. 20250.

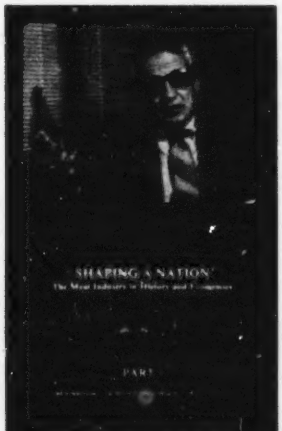
Your Career in Agriculture. Overview of eight major career fields in agriculture. Single copy free. From: Future Farmers of America, P.O. Box 15160, Alexandria, Virginia, 22309.

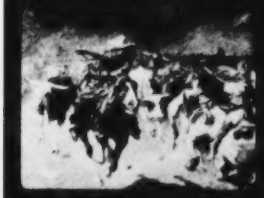
Your Career in Animal Technology: Today's Veterinarian. Single copy free. From: American Veterinary Medical Association, 930 North Meacham Road, Schaumburg, IL 60196.

Occupational Briefs (leaflets). $2.00 per single copy plus $1.00 for shipping and handling. From: Chronical Guidance Publications, Inc. (quantity copies less). Moravia, New York, 13118.

Note: leaflets related to *SHAPING A NATION* are:
Agricultural Commidity Graders #250
Agricultural Sales Rep. #498
Animal Scientists #238
Animal Technicians #480
County Agricultural Agents #177
Food Technologists #114
Leather Tanning and Finishing Workers #297
Livestock Buyers and Brokers #515
Livestock Industry Workers #479
Meat & Poultry Inspectors #453
Meat Cutters #81
Meat Packing Production Workers #423
Rangeland Specialists #482
Veterinarians #83

FILMSTRIP SCRIPT





PART I

1.
My name is Darrell Hipes, Executive Vice President of the National Livestock Producers Association. Our Association thinks it's so important for you (as future voters, workers and consumers) to know about the economics of farming and ranching (with emphasis on red meat production), that we've sponsored this audio-visual kit on economics and agriculture. The 200,000 members of the National Live Stock Producers Association who raise and market livestock are proud to make available these educational materials in support of the American enterprise system.

2.
(MUSIC)

3.
(MUSIC)

4.
(MUSIC)

5.
(MUSIC)

6.
(MUSIC)

7.
(Narrator) The adventure of cowboy life on the open range was exciting...and hard work.

8.
It's always had a popular place in America's history.

9.
Christopher Columbus brought longhorn cattle to the New World in the early 1500's...

10.
...and throughout that century, longhorned cattle continued to come to America with the Spanish...

11.
...who also brought horses into Mexico.

12.
Settlers who came to the colonies in the New World from England brought sheep, horses, cattle and also hogs.

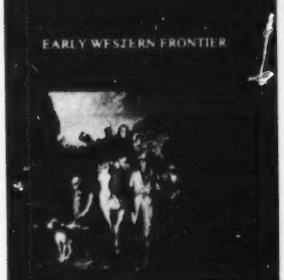
13.
American Indians became sc fond of pork that they began to raise hogs themselves.

14.
The early pioneers would not have survived without livestock. They needed hogs, cattle and sheep for food...

15.
...for clothing...

16.
...for transportation...

17.
...and for work on farms. Many farmers raised oxen (a type of cattle) to help till the soil for crops...and part of the crops were used to feed the oxen.



18.
The lure of the frontier, west of the Allegheny Mountains, helped the livestock business to grow. Because the government wanted people to settle the frontiers, it provided inexpensive land...land on which livestock could be raised.

19.
People moved to these locations with their animals and produced even more livestock.

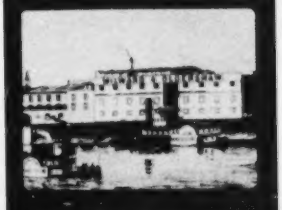
20.
A growing country meant more people and more people meant a greater demand for meat.

21.
Factory workers and immigrant laborers in Eastern U.S. cities depended on livestock farmers for the meat they all wanted for their daily meals.

22.
This encouraged farmers to raise livestock to sell. With the many acres of land they owned...

23.
...farmers could grow more grain than their families needed for food. The extra grain was used to feed larger numbers of livestock.

24.
Before the railroads were built, these farmers used the nation's waterways to transport livestock from the frontier back to the people on the east coast.

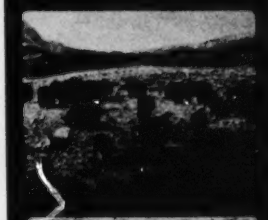


25.
River towns like Louisville, Kentucky and Cincinatti, Ohio became centers for buying and selling livestock.

26.
So many hogs came through the city of Cincinnati, that it became known as "Porkopolis."

27.
In the early years, pork was America's basic meat. Dishes like Philadelphia Scrapple, Pork Pot Pie and Roast Suckling Pig were popular. A product known as "salt pork" was an important ingredient for flavoring in many other early recipes...

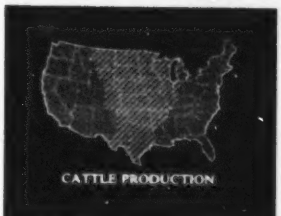
28.
...and was a major meat for westward moving pioneers.



29.
Beef became a basic meat around the time of the Civil War. As buffalo numbers became smaller and smaller, large areas of grassland in the plains region opened up for cattle raising.

30.
At first, wild cattle, descendants of the longhorn brought by the Spanish three centuries earlier, were simply rounded up and taken to market to be sold.

31.
Later, other breeds of cattle were raised by ranchers on the thousands of acres of free pasture in this region.



32.
By the 1880's, the cattle-producing industry stretched from Indiana and Michigan all the way south to Texas and west to Wyoming and Montana.

33.
The late 1880's were the days of the great cattle drives. After rounding up cattle which had roamed free all winter...

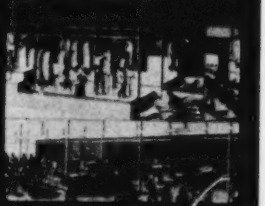
34.
...cowboys drove large herds north out of Texas along the *Chisholm Trail* and the *Western Trail* to places such as Abilene and Wichita, Kansas...

35.
...where the railroad waited to take the cattle east to cities like St. Louis, Chicago, New York and Boston.

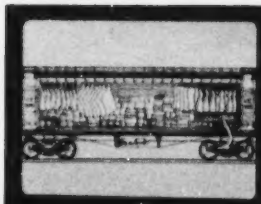
36.
The need to move livestock from where they were grown, in the central plains states, to where they could be sold for meat, at large population centers, led to the development of many miles of railroad in the Midwest.

37.
The railroad led to even greater cattle production by giving ranchers a dependable way to move meat animals quickly to market.

38.
From the railroad centers in Kansas, cattle were then shipped to large population centers like Chicago where there was a high demand for meat.

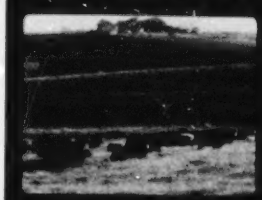


39.
Hogs were also sent to these large cities from farms in the midwest. There, both cattle and hogs were converted into meat by meat packers.



40.
The development of the refrigerated railroad car at the beginning of the 20th century helped to make possible the more economical transportation of fresh meat, rather than live animals, to distant locations.

41.
Since that time, the use of refrigeration and continued improvements in transportation and storage have all helped the meat industry to provide consumers throughout the entire country with a fresh, safe and abundant meat supply.



42.
Since its beginning, the livestock and meat industry, like any business, has needed four things to produce a high-quality product.

43.
A livestock farmer or rancher needs land resources—which include water, space and pasture and food for his or her animals...

44.
...labor resources—workers who help do the jobs...

45.
...and capital resources—such as tools, barns, equipment and livestock.

46.
The fourth thing needed to raise livestock is a manager...the farmer or rancher...a person whose business skills and ability to manage resources enable him or her to make a profit.

47.
These resources—land, labor, capital and management—are known as the four factors of production. No farm, ranch or other business can exist without them.

48.
John and Clara Cargile, who raise cattle and sheep, own a ranch in Texas. The Cargiles manage their land, labor and capital as efficiently as possible. They run a modern, profitable business.

49.
(John Cargile) I was born here and have been involved with the ranch all of my life. I finished college in 1948 and became active then in the operation of the ranch and managed it since then.

50.
The ranch is 24,000 acres which is 38½ sections. We usually keep about 400 head of cattle and about 3000 head of sheep. We have to vary that some with the fluctuation in the rainfall.

51.
I have a ranch foreman, Gary Tankersly, who lives on the ranch.

52.
He has two teenage children, Jeff and Becky, who help him quite a bit during the summertime, especially.

53.
He has a man named Ramundo de Luna who works for him on a full time basis and then Ramundo's teenage son Jose helps out also.

54.
Livestock thrive in this area. The elevation is about 2000 feet. We have a minimum amount of trouble with diseases and parasites and things like that, that influence livestock production.

55.
The land can only produce grass that can be utilized by livestock ruminant animals and they are able to convert that grass into red meat that human beings can benefit from. It's only through the grazing of livestock that we can get any benefit out of this natural resource that covers about a third of the United States.

56.
One of our activities to protect the animals involves spraying with insecticides to protect them from flies and other external parasites and then we carry on a well-planned immunization program to protect them from the few diseases that they might be exposed to.

57.
We have to organize our day as to the things we will do with the livestock: whether they need spraying that day, when to start our feeding program, when to sell the calves and the lambs that we raise...

58.
...when to shear the sheep. We have to repair the windmills and keep them pumping.

59.
We have to repair the fences as they deteriorate. We have to carry on our brush control programs on an annual basis.

60.
We operate our ranch much as a farmer does in that we produce an annual crop of lambs and calves. When the lambs are about 5 months of age...

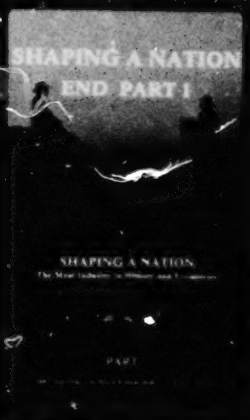
61.
...and the calves are about ten, it's time for us to sell them and then they go on to someone else who carries them in the production chain on up to the optimum size.

62.
Ranching is a risky business and some ranchers are forced out of business because of low rainfall and low market prices that keep them from bringing in enough money to pay their bills and show a profit.

63.
I enjoy being in the ranching business because it gives me a great deal of satisfaction to raise the animals and see them grow and develop and improve genetically.

64.
There's a lot of satisfaction also in managing the pastures and developing the grasses and increasing the productivity of the land.

65.
I like to be on the ranch and get on a horse, go with the men on the ranch, help them work the livestock and I enjoy the independence of being in the ranching business.



66.-67.-68.
(MUSIC OVER CREDITS)

PART II

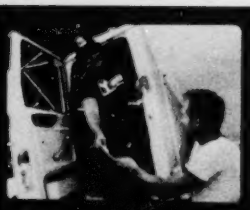
69.
(MUSIC)

70.
(Narrator) Don and Karen Gingerich feed cattle and raise hogs on the farm they own near Iowa City, Iowa. The Gingeriches, just like the Cargiles, by managing their land, labor and capital as efficiently as possible, run a modern, profitable business.

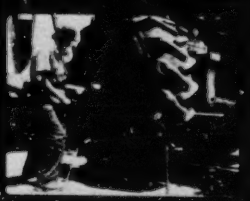
71.
(Don Gingerich) Our farm is a grain and livestock farm. It consists of 650 acres. Our principal crop is corn. We grow 500 acres each year. We also have some pasture land.

72.
Our corn and pasture are used to feed 3500 hogs each year and also we have 350 cattle. We consider this a family farm. While our children were growing...

73.
...we did most of the work. Now that they are in college and our farm has grown, we now employ two young men to help.



74.
We have many other support people such as feed processors, truckers, live stock buyers, people who specialize in genetics...



75.
...mechanics, veterinarians; seed companies and fertilizer dealers. They are all a very vital part of our daily operation.

76.
Each day begins around 7:30 a.m. We make the first stops to see how the mother pigs and their litters are getting along. Then we make our rounds to the other animals to feed them and make sure they're comfortable and doing well.

77.
We consider ourselves somewhat of a doctor. With 3000 animals on the farm, some of them may not be feeling well and may need some medical attention.

78.
It is very important that our animals are well and happy. Comfortable and contented animals grow much faster and stay healthier. Most of each morning is spent with the animals...

79.
...the rest of the day is used to work in the fields, repair equipment and make the many decisions required to run a farm profitably.

80.
In Iowa we have four seasons and each one brings a unique and different type of work. In the spring, the baby calves are born and we plant most of the crops.

81.
Baby pigs are born almost every day of the year. Summer finds us cultivating the crops, keeping pigs cool and comfortable...

82.
...and managing the cows and calves on pasture.

83.
In the fall, we harvest the crops and put the crops in the bins and barns for feed for the rest of the year. It is also the time to bring in the livestock before the cold weather sets in.

84.
Winters can be very cold. We spend this time giving extra care to the animals, especially keeping them warm.

85.
Each day I talk to livestock buyers to determine when we can get the best price for our animals.

86.
I enjoy being a farmer because I like to raise and care for animals and grow crops. And particularly, I'm interested in genetics, the breeding to create better and healthier animals.

87.
Farm work is different every day and never boring and it's an opportunity for our family to work together and share the satisfaction of operating a productive and profitable business.

88.
(Narrator) Because the Gingeriches grow their own corn for feed, they keep their hogs and cattle until they've gained enough weight to be converted into meat.

89.
Other livestock producers, like the Cargiles, raise young animals on grass and then sell them to another manager who owns and operates a feedlot.

90.
Animals remain in the feedlot for three months or more. During that time the animals are cared for and fed a high-nutrition feed that helps them to gain weight more efficiently than if they continued to graze on grass.

91.
This part of livestock raising is called finishing. Raising and finishing livestock are the two parts of the first stage in meat production.

92.
The second stage of meat production includes packing and processing of meat.

93.
Between each of the stages of meat production is a market. The first market occurs when farmers, ranchers or feedlot operators...

94.
...sell their animals to buyers from meat-packing companies. Sometimes this market occurs as an auction.

95.
After the livestock are bought by meat packing companies, they are then transported from feedlots by truck to meat packing plants...

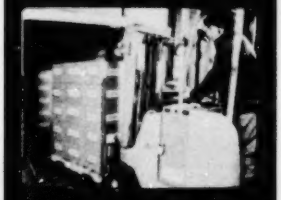
96.
...where the industry's over 150,000 workers convert livestock to meat for sale to supermarkets and restaurants. After slaughter, the carcasses are washed, chilled, cut into smaller sections and transported to warehouses...

97.
...or stores where they are further cut into roasts, steaks and chops. Some of this meat also becomes the hamburgers that you buy.

20

PROCESSED MEATS

BY-PRODUCTS



98.
Sometimes meat is processed further in order to preserve it and prepare it in another form for consumers.

99.
This meat is called processed meat. Examples are ham and corned beef which date back to the time of the colonists. Sausages, hot dogs and bologna are other processed meats.

100.
Parts of the animal not used for meat, such as hides and horns are called by-products. These are used to make other useful items including chewing gum, marshmallows, margarine, lipstick, shoes, other leather goods, buttons, glue and even piano keys and violin strings.

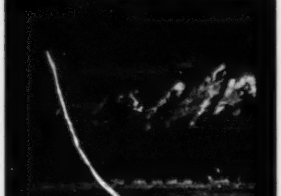
101.
Cattle and hogs also provide the substances used in more than 100 medical drugs. One of these drugs, insulin, helps to keep thousands of people with diabetes alive.

102.
A second market in the stages of meat production occurs when the meat packer sells meat to the retailer. The retailer can be a supermarket, a butcher shop or a restaurant.

103.
Still another market occurs between the retailer and the consumer. It's at this market that the consumer decides what cuts of meat to buy.

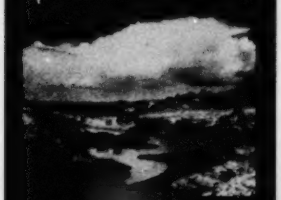
104.
Just like the buyer who represents the meat packer or the retailer, the consumer's decision is based on quality and price.

105.
When beef, pork, lamb, veal or some other food is in short supply and a lot of people want it, the price goes up as consumers compete with each other to buy it.



PLAINS STATES

CATTLE PRODUCTION



HOG PRODUCTION

106.
Some consumers will pay the higher price. Others will simply choose lower-priced cuts from the wide variety at the meat counter.

107.
This wide variety of meat available at supermarkets and restaurants comes from many different regions of the country.

108.
The plains states produce the most livestock because the climate and geography make these such good areas for raising cattle and hogs.

109.
Production of cattle and calves makes a significant contribution to the economy of over 30 states, but the top ten are Texas, Nebraska, Iowa, Kansas, South Dakota, Oklahoma, California, Missouri, Minnesota and Colorado.

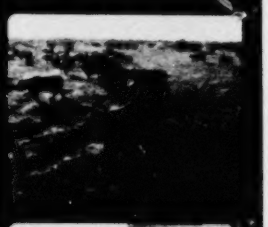
110.
Many of these states are well suited to cattle grazing because of their extremely large areas of grassy range land. Much of this land can produce enough grass for livestock but it doesn't have enough rainfall to grow cultivated crops.

111.
Most hogs are produced in the north central states. The top ten hog-producing states are Iowa, Illinois, Minnesota, Indiana, Nebraska, Missouri, North Carolina, Ohio, Kansas and South Dakota. Much of this area is known as the Corn Belt.

112.
The corn belt provides an excellent supply of both corn and soybeans which are the major sources of feed for hogs and the major feed for cattle during finishing.

113.
Corn and soybeans are grown in the corn belt because of the fertile soil, level land and suitable climate.

114.
Sheep are raised over a wide geographical area. Texas is the leading sheep producer as well as cattle producer. In the Rocky Mountain region, Wyoming, Colorado and New Mexico are important sheep-producing states...so are South Dakota and California.



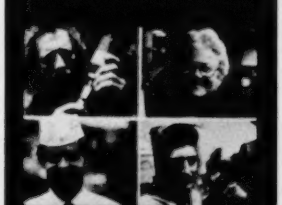
115.
Not only are many different parts of the country involved in producing livestock and meat, but the entire industry...

116.
...makes possible many different jobs... from farm hands and grain farmers to truckers and even bankers.

117.
The stages of production from raising and finishing livestock...

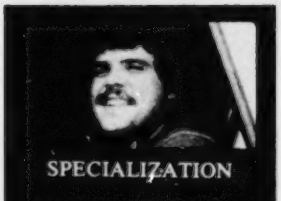
118.
...to meat packing and processing ...to retailing, require dozens of different kinds of workers.

119.
This division of work among many people with different skills is called specialization.



120.
Veterinarians, meat cutters and mechanics...are just a few of the many people who bring beef steaks, pork chops or lamb roasts to your dinner table...

121.
...or hamburgers or hot dogs to your favorite fast food restaurant.



122.
In the livestock and meat business, as in any business, specialization of workers makes possible a wide variety of jobs.

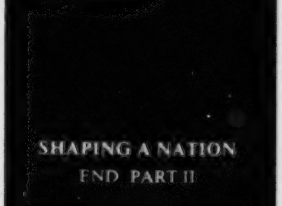
123.
In any business, markets link the people who sell products and services with the people who buy them.

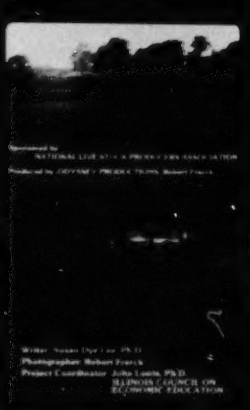
124.
In any business, production requires four things: land, labor, capital and the manager who organizes them for a profit.

125.
Profit is what motivates the nation's thousands of livestock producers like the Gingeriches and the Cargiles to take the risks connected with farming and ranching.

126.
Such people contributed to the nation's economic and nutritional well-being in the days of the early settlers and they continue to do so to this day.

127.
(MUSIC)





128.
(MUSIC)

129.
(MUSIC)

GLOSSARY

assembly line: a production system in which work is divided into separate operations and passed along from one worker to the next in sequence

*__auction:__ a public sale of items to the highest bidder

by-product: something produced in addition to the main product

*__capital:__ machinery, tools, buildings and other physical property used in a business

cattle: farm animals such as cows, bulls and steers, especially those domesticated for producing beef, dairy products, etc.

competition: businesses or individuals vying with others to attract customers

consumer: a user of goods and services

costs: the expenses incurred in production

cow-calf operation: a livestock business that maintains and breeds a herd of cows which annually produce calves; calves are then raised until they are weaned

decision-making: a process by which one arrives at solutions to problems

*__demand:__ the ability, desire and willingness to buy goods and services

division of labor: the separation of production into different tasks allowing specialization

entrepreneur: the person who organizes, operates and assumes the risk for business ventures

*__factors of production:__ resources required for the production of all goods and services; the four general classifications are land resources, labor resources, capital resources and management ability (usually called entrepreneurship)

feeder: a livestock business person who feeds cattle or pigs from feeder animal stage

*__feedlot:__ in livestock production a location where the final growing, weight gain and finishing take place before the animals are sold to a packer

*__finishing:__ feeding an animal from feeder stage to its final market weight before being sold to a packer

*__frontier:__ a new and mostly unexplored, undeveloped and unsettled area of land usually at the edge of a settled area or just beyond

*__genetics:__ the science of how genes affect the origin or development of living things (animal or plants)

goods: tangible objects that are scarce

graze: to feed livestock on growing grass and herbage

*__hog:__ a pig, especially a full-grown, domesticated pig

interdependence: reliance on one another

invention: an original device; a new way of doing something

labor: workers, human effort, either mental or physical

land: natural resources such as soil, climate, trees, rivers and minerals

*__livestock:__ domestic farm animals such as cattle, hogs, sheep or horses raised for home use or for sale

longhorns: a breed of cattle descended from stock introduced into the New World by the Spanish and characterized by their long horns

loss: in business, a greater outlay of expenditures than income

management ability: the willingness to take risks; refers to the entrepreneur or the owner of the business

*__manager:__ the owner, or a person designated by the owner, who operates the business

*__market:__ wherever the buying and selling of goods and services takes place

mass production: the manufacture of goods in large quantities

meat packer: a person or business which converts live animals (cattle, hogs, lambs) into food products and distributes them to restaurants and grocery stores

oxen: adult, castrated bulls

packing plant: see "meat packer," above

*__pasture:__ an area of land with grasses or other vegetation eaten by grazing animals

price: the cost of purchasing a good or service

*__processor:__ a middleman who prepares products for wholesale and retail sale, e.g., a meat packer or a meat processor†

producer: a person who grows, makes or produces goods and services

productivity: the degree of efficiency with which something is produced

*__profit:__ the difference between the selling price of goods and their actual cost; the net income or amount of money left after all the costs have been subtracted

range: open land on which livestock graze and water

region: an area of the world which shares similar features

resources: those factors (land, labor, capital and entrepreneural ability) used in the production of goods and services

retailer: a merchant who sells goods and services to a consumer

risk: to take a chance on losing or injuring something of value

*__ruminant:__ cud-chewing animals with a four-compartment stomach, such as cattle and sheep; microorganisms in their rumen (one of the compartments) assist them in the digestion of fiber and conversion of it to high quality protein

sales: money earned from the sale of goods or services

salt pork: pork fat back, jowls or bellies which have been packed in dry salt for 2-8 weeks as a means of preservation

scarcity: a shortage of resources, goods or services

services: productive acts that satisfy consumer wants, but do not result in tangible objects

slaughter: the humane killing of animals for use as food

soybean: an Asiatic legume widely grown for forage and for its edible seeds that yield a valuable oil

*__specialization:__ concentration of effort in a particular aspect of production

supplier: companies who provide manufactured goods to other businesses

supply: the quantity of a good available for purchase at various prices

stages of production: steps in the process of making a product for the consumer; also referred to as production chain

tannery: a business where hides are converted into leather products

technology: a technical method of achieving a particular purpose

transaction: a business deal; an exchange of goods or services

value: the monetary or material worth of goods or services to be exchanged

want: goods and services which people desire

*These words also appear on **VOCABULARY/A-1.**

†In the meat industry, both the packer and the processor are considered processors in the common meaning of the term. Meat processors generally are specialists who manufacture products made from meat such as sausages and ham. Some, but not all, packers both slaughter livestock and manufacture processed meat products.

TEACHER'S GUIDE

2 FOUR FACTORS OF PRODUCTION

OVERVIEW

The economic concepts of factors of production and profit are developed in this guide. Lesson I and II are both designed to teach the four learning objectives for the unit so it is not necessary to use both. The extension activities are designed to reinforce the economic content presented in the lesson you choose. Using one of the major activities and two or three extension activities should require a maximum of three or four class periods.

Supplementary materials are listed on page 8 of Teacher's Guide 1.

ECONOMIC CONTENT

The production of all goods and/or services requires the use of resources which economists refer to as factors of production. There are four general classifications for factors of production (or resources): land resources, labor resources, capital resources, and management ability (usually called entrepreneurship).

Land resources are all natural resources: land, water, minerals in the ground and air. When the owners of land allow it to be used by someone else to produce goods and services, they usually receive rent in return.

Labor resources include both physical and mental effort. The work of a truck driver, teacher and veterinarian would all be considered labor. Compensation to labor includes wages, salaries and fringe benefits.

Man-made resources which are used in the production of other goods and services are called capital resources. These include machines, animal feed, animal medicine, breeding livestock and many more. Capital resources do not include money. Money is simply the means to purchase capital resources. The return earned by the owners of capital resources is called interest.

Management ability, or entrepreneurship, can be defined as: (1) the person or persons who take the risk in an enter-

ECONOMIC CONTENT
CONTINUED

prise or (2) the unique skills some people have to organize the other three resources to produce a product more efficiently than other producers. The compensation for risk and unique skills is profit. (Although a foreman on a ranch manages resources, he or she does not take the risks that the ranch owner takes and is therefore not an entrepreneur.)

The production of all goods and services requires the use of these four resources. When the resources are used, costs are incurred. These costs are the cost of resources and are called costs of production.

STUDENT OBJECTIVES

FOR GUIDE 2

The learner will be able to:
- name the four factors of production (land, labor, capital and management).
- categorize specific resources under the four factors of production.
- list at least two conditions which affect the farmer's profit (weather, prices, disease, supply, etc.).
- describe at least two reasons why a person works as a farmer (profit, tradition, independence, enjoys working with animals or plants).

LESSON I

THE FARMER-PRODUCER: A MANAGER OF RESOURCES

KIT MATERIALS REQUIRED
Poster: **PARTNERS IN PRODUCTION**
Activity Masters for Guide 2:
WORD SEARCH PUZZLE/B-1
FACTORS OF PRODUCTION/D-2
EVALUATION SHEET/H-2

KEY WORDS
(See Glossary, Teacher's Guide 1, page 17 for definitions.)

Capital	Profit
Labor	Resources
Land	Risk
Management Ability	

SUGGESTED TEACHING TIME
(One class period)

DEVELOPING THIS LESSON
If desired, pretest, using **EVALUATION SHEET/H-2.** Introduce this activity by displaying the **PARTNERS IN PRODUCTION** poster. Students are to imagine that they are entering the livestock production business and need to make a list of resources they will need before they can begin. List the students' suggestions on the chalkboard, encouraging them to include resources not listed on the poster. It may be necessary to review the portion of the filmstrip dealing with farm life (part I, frames 42-65 and part II, frames 70-87).

Distribute **FACTORS OF PRODUCTION/D-2.** Review each of the four factors. Proceed through the compiled chalkboard list of resources; ask students to record their responses under the appropriate columns. Discuss how these factors are involved in livestock production. Conclude by having students write their own definition of each factor on their activity sheets. Suggested questions: What do all of the resources in each column have in common? Why are they important to a farmer? Could he do without them? How are capital resources different from land resources? Differentiate between management and labor. How are these resources an expense to the farmer? This may be a good time to review relevant frames of the filmstrip to help students write their definitions. Students can share their definitions to further class discussion.

Next, write the words "management risks" on the chalkboard. Have students decide what risks are involved in being a meat producer. List their responses on the chalkboard (examples: rainfall shortage, insect infestation, market oversupply, labor shortage, gasoline price increase, animal disease). Discuss the list in terms of which events are controllable, preventable and/or remedial.

As homework, assign the **WORD SEARCH PUZZLE/B-1.** Use **EVALUATION SHEET/H-2** as a posttest.

LESSON II

THE FARMER-PRODUCER: A BUSINESS FOR PROFIT

KIT MATERIALS REQUIRED
Poster: **PARTNERS IN PRODUCTION**
Activity Masters for Guide 2:
PROFIT OR LOSS?/E-2
PROFIT OR LOSS SITUATIONS/F-2
EVALUATION SHEET/H-2

KEY WORDS
(See Glossary, Teacher's Guide I, page 17 for definitions)

Costs	Profit
Loss	Risk
Price	Sales

SUGGESTED TEACHING TIME
(Two class periods)

DEVELOPING THE LESSON
If desired, pretest, using **EVALUATION SHEET/H-2.** Refer students to the **PARTNERS IN PRODUCTION** poster. Have them consider things which influence the amount of profit a farmer makes. Through this activity, they will practice their skills at being farm managers by thinking of ways to limit risks.

Write the column headings "land, labor and capital" on the chalkboard. Ask the students to list what expenses would be incurred under each heading (examples: land-rent, mortgage payments, taxes, interest; labor-veterinarian, wages, employee benefits; capital-equipment, repairs, gasoline, feed, seed, utilities). Label a new column "sales." List products that a farmer or rancher might sell.

Distribute the **PROFIT OR LOSS?/E-2** and the **PROFIT OR LOSS SITUATIONS/F-2** sheets. Students are to imagine they are farmers. Instruct them to circle any three numbers on their activity sheet, omitting year one (1) as it will be used as a class example. These numbers will indicate the three years of farm management in which they will participate. The data sheet will provide students with the dollar amounts for sales and expenses for the three years they have selected. They will then determine if they have made a profit or suffered a loss. Be sure students understand the subtraction process necessary to determine profit and loss. Using the data sheet information for year one, work out the profit or loss for that year on the board. Students may fill in the information on their activity sheets as well, circling whether the year was a profit or loss year. Instruct them to follow the same procedure for the three years they have selected.

After profit or loss has been determined for each year, instruct students to enter their income and expense figures for their three years in the box in the middle of the sheet. Each student should then determine if he or she made a profit for the three-year period. If time allows, review the impacts of each situation. Suggested discussion questions: Why did your expenses (or income) go up or down? How might you protect against the same expenses going up again? Is there any way to be sure that income can be increased each year? What risks does a farmer face? Why is it important for a farmer to be a good decision maker?

Conclude the lesson by discussing the importance of profit to a farming operation. Important points to include in this discussion are: profit is necessary to stay in business; profits enable businesses to expand; profit and/or loss affects others who do business with the farmer. Use **EVALUATION SHEET/H-2** as a posttest.

EXTENSION ACTIVITIES

COMPLETING A WORD PUZZLE

As homework, assign the **WORD SEARCH PUZZLE/B-1.** Students will be reacquainted with vocabulary and given further practice in categorizing resources under the four factors of production. Answers are provided on page 7, guide 1.

DRAWING RELATIONSHIPS

Ask students to go through newspapers and bring one headline to class. The headline should report a circumstance or event which will, in some way, affect farmers' decisions about farm management. Ask each student to read their headline aloud. Display the headlines where they can be read by the class. Ask students to choose a headline and write a paragraph explaining how this particular event might affect the decisions a farmer or rancher might have to make. Let students exchange papers to read each other's work. Conclude this activity by asking the class to summarize the topics which have an impact on how farmers or ranchers make decisions about farm management (weather, gasoline prices, feed, new inventions, current meat sales).

REVIEWING TOOL RESOURCES

Divide the class in half. Ask one half of the class to make a list of tool resources used on farms before the Civil War. Ask the other half to make a list of tool resources used today. Make appropriate headings on the chalkboard and let the students take turns filling in each side. Compare the two lists. Which list is longer? Why? Which tools appear on both lists? Why? Which list allows a farmer greater independence? Why? Conclude this activity by having students write a third heading on the chalkboard entitled "Tools of the Future." Ask students to imagine what tools they think a farmer in the year 2050 will use to operate a farm.

MAKING A GRAPH

Distribute **MAKING A GRAPH/G-2** sheet. Review basic graph-making concepts. Call students' attention to exercise (a) on their activity sheet, pointing out the data and the appropriate labeling of the horizontal and vertical axes on the actual graph. Instruct them to graph the data as each year's information is presented orally. (It may be necessary to reproduce graph (a) on the chalkboard). Finally, instruct students to complete graphs (b) and (c) independently.

After graphing has been completed, ask several students to reproduce their graphs on the chalkboard for discussion. Suggested discussion questions: Why is record-keeping important? How are graphs a useful tool for farmers, producers, retailers, processors? How can year-by-year comparisons be useful? What conclusions can be drawn from the three graphs?

TRANSFERRING KNOWLEDGE

Review the four factors of production. Display pictures of (1) a fast-food restaurant, (2) a butcher shop, (3) a meat packing plant, (4) the school cafeteria. Ask students to categorize the resources in the pictures under the four factors of production.

VISITING A FARM

Arrange for the class to take a field trip to a farm, if possible. If a farm visit is not feasible, contact a local agricultural agency and arrange for someone to visit the class and discuss farming. The focus of the discussion should relate to the filmstrip as much as possible. Ask the class to write a two-paragraph essay about the farm visit (or guest speaker) and include the things they might enjoy about life as a farmer and the things they feel they would dislike. Ask the students to state if they would like to be a farmer and why or why not.

ANSWERS TO ACTIVITY AND EVALUATION SHEETS

PROFIT OR LOSS?/E-2
PROFIT OR LOSS?/F-2

Box 1.
The loss of ten steers would reduce the farmer's sales. Expenses would increase because of veterinary bills (profit: $13,000).

Box 2.
Fewer hogs would result in less pork being supplied; thereby raising price (profit: $32,000).

Box 3.
An embargo on shipping grain to a foreign country would create a surplus, causing the price of grain to decrease and resulting in a decline in sales. Costs would increase due to the increased storage costs to the farmer (profit: $4,000).

Box 4.
A drought would decrease the yield of the farmer's grain crops and reduce sales. Although the price of grain would probably increase, it would not be enough to offset the loss in yield (loss: $10,000).

Box 5.
The increased consumer demand would be partially offset by the increased supply. Price would increase slightly, resulting in a small increase in sales (profit: $28,000).

Box 6.
The replacement of a tractor would increase expenses but have no impact on sales. Emphasis may be made on the high cost of capital in farming. In this case, a tractor may cost $40,000 or more (loss: $15,000).

Box 7.
The increased yield would result in reduced costs but have little impact on sales. This case could also be discussed with the increased yield being sold and sales increasing with costs remaining constant (profit: $35,000).

Box 8.
The costs of rent, fuel and feed are all expenses to the farmer and result in reduced profit if the prices of farm products do not change (profit: $5,000).

In this activity the high risk factor should be emphasized...each case emphasizes a situation over which the farmer has little or no control.

EVALUATION SHEET/H-2

1. F	6. a
2. T	7. a
3. T	8. b
4. F	9. c
5. T	10. a

TEACHER'S GUIDE

3 MARKETS

OVERVIEW

The economic concept of markets is developed in this guide. Lesson I and II are both designed to teach the four learning objectives for the unit, so it's not necessary to use both. The extension activities are designed to reinforce the economic content presented in the lesson you choose. Using one of the major activities and two or three extension activities should require a maximum of two class periods.

ECONOMIC CONTENT

In a market economic system, like that characterized by the United States, prices are used to allocate goods, services and resources.

Markets exist whenever buyers and sellers exchange goods and services. Markets can be classified in a variety of ways. Examples of markets would be auctions, department stores, automobile show rooms and school cafeterias. Markets can also be referred to as wholesale markets and retail markets. Wholesale markets typically provide for the exchange of goods and services between intermediaries in the market or between an intermediary and a retailer. For example, a market exists when farmers or ranchers sell their cattle to a buyer, a feedlot operator or a packer.

The exchange process in markets is facilitated by prices. Price is the expression of the value of goods or services being exchanged. As more people wish to purchase a good or service, the price will generally go up and vice versa. Price is also impacted by costs of production. As costs incurred by the producer increase, the market price will tend to rise.

STUDENT OBJECTIVES

FOR GUIDE 3

The learner will be able to:

- describe a market as any place where buyers and sellers exchange goods and services.
- identify two of the markets in the stages of meat production (producer to packer, packer to retailer, retailer to consumer).
- identify three markets in which he or she participates.
- define price as a quantity of money required to buy a good or service.

LESSON I

MARKETS ON WHICH AGRICULTURE DEPENDS

KIT MATERIALS REQUIRED

Poster: **PARTNERS IN PRODUCTION**

Activity Masters for Guide 3:
MARKETS IN THE PRODUCTION OF MEAT/I-3
EVALUATION SHEET/K-3

KEY WORDS

(See Glossary, Teacher's Guide I, page 17 for definitions.)
Market
Profit
Supplier
Stages of Production

SUGGESTED TEACHING TIME

(One class period)

DEVELOPING THE LESSON

If desired, pretest, using **EVALUATION SHEET/K-3.** Review with students the definition of a market, emphasizing that there are markets at each stage of production and that producers in each obtain resources necessary for production. (Refer to economic content on page 1.)

Using the **PARTNERS IN PRODUCTION** poster, have students identify all the markets a farmer participates in to obtain resources (goods or services), e.g., feed from a feed company, tractor repair from an implement dealer, fencing from a farm supply store, loans from a local bank, medical care from a veterinarian, etc. List the responses on the chalkboard under the heading of farmer (producer). Encourage students to identify businesses not included on the poster and write on board. Beside each business, identify the market and transaction which would take place, e.g., farm supply store—farmer purchases fence-mending material. Continue this activity using the headings of processor and retailer. In each case, emphasize the market and transaction taking place. Use **EVALUATION SHEET/K-3** as a posttest. As homework, assign **MARKETS IN THE PRODUCTION OF MEAT/I-3.** Answers to I-3 and K-3 are on page 5 of this guide.

LESSON II

THE MANY MARKETS OF MEAT

KIT MATERIALS REQUIRED
Activity Masters for Guide 3:
TRANSACTION CARDS/J-3
EVALUATION SHEET/K-3

KEY WORDS
(See Glossary, Teacher's Guide I, page 17, for definitions.)
Competition
Market
Profit
Stage of Production

SUGGESTED TEACHING TIME
(One class period)

DEVELOPING THE LESSON
If desired, pretest, using **EVALUATION SHEET/K-3.** Review the concept of a market. Using their social studies texts, have students locate pictures of markets. Each picture should be discussed in terms of: how they know this is a picture of a market, who is buying, who is selling and what goods or services are being traded? It's important that at least one picture illustrate the purchase of a service.

Further discussion should concentrate on the character of a market. Some discussion questions are: What are the essential ingredients of a marketplace (buyer, seller, something to exchange)? What can be sold in addition to goods (services)? Does money have to change hands in a transaction? (No, anything the buyer and seller agree has an equivalent value can be exchanged.) Why is money usually used? (It's easier than bartering.) Students should be able to formulate a definition of a market.

Students will now apply what they have learned by listing the markets they have participated in during the past week, either as buyers or as sellers, and then share their lists. (Examples are delivering newspapers, babysitting, cutting a lawn, going to a movie, buying a fast food meal, operating a video game.) Next, have students list any places they have visited in the past week where meat was bought or sold. Finally, students should try to determine where these places purchased their meat.

Through this activity the student should be able to follow, in reverse, the stages of production (consumer, retailer, processor, producer).

Conclude this lesson with the simulation of the different markets that take place as a steer passes through the production process. Choose volunteers to play these roles: a farmer, two buyers, two feedlot operators, three meat processors, a retailer and a consumer. Have the students form a line in the order above, across the front of the room, facing the class. Review the stages of production, emphasizing the service provided in each stage. Also emphasize that as each service is provided, the price of the steer increases, e.g., the feedlot operator increases the weight of the steer, thereby having more poundage to resell. (More than one buyer is a representation of market competition.)

Cut out and issue the proper **TRANSACTION CARDS/J-3** to each of the students playing a role. Also, distribute the sheets to remaining students to help them better understand the transactions by making their own computations. Cut out a picture of a steer. Give each student a few minutes to figure out what some of the costs incurred in production are. Beginning with the steer at the farmer's ranch, have the farmer sell the steer to the feedlot operator. The feedlot operator, in turn, sells the steer to the livestock broker and so on to the consumer.

When the simulation is finished, discuss the market process and how it worked in the simulation. Use **EVALUATION SHEET/K-3** as a posttest. Also discuss possible answers to questions on bottom of the **TRANSACTION CARDS.** (See page 5 for answers.)

EXTENSION ACTIVITIES

These short activities are for review and reinforcement of the economic ideas associated with markets.

REVIEWING TRANSPORTATION NETWORKS

Review frames 24-39 (part I) and 94-102 (part II) of the filmstrip without the sound. Ask students to raise their hands when they see transportation being used. Each time they raise their hands, stop and ask a student to identify the two steps in the production process which are being linked by transportation, e.g., frame 95: feedlot to packing plant. Discussion questions might include: How important is train transportation now compared to its use 100 years ago? Why have cattle drives been eliminated? How are trucks vital to the meat production industry? Ask students to hypothesize about how the widespread use of truck transportation affected the location of meat processing plants. What role does transportation play in markets (transportation provides a link between markets in different geographical areas)?

DISCUSSING LIMITED RESOURCES (SCARCITY)

Ask students to list all of the things they would buy if they had no financial limitations on their wants. Assign a dollar value to each item. Discuss some of the things students want and total the cost. Next, ask the students to imagine that they now have a limited amount of money—$1000.00 won as a prize. Ask them to decide which items on the list they would buy. Cut the amount of available money to $500 and ask the students which items they would still choose.

Conclude this activity by relating scarcity and choices to income. How does the money available place limitations on wants? What ways do they use to increase their income (household chores, cutting lawns, babysitting, etc.)? Why are wants unlimited? Do whole countries face the same problems of scarcity as individuals? How do markets help us satisfy our wants?

GIVING REPORTS

Ask four students to give short reports on the role of grain in the livestock industry. The topics might include: the role of grains in general, the importance of grain to livestock, the corn-hog relationship. Several books listed in the Supplementary Materials section of Teacher's Guide 1 (page 8) will help students get started with their research.

CHECKING VOCABULARY

Ask students to review the vocabulary words important to this particular guide. Explain why the following groups of words go together: goods and services; buyer and seller; feedlot and finishing; producer, processor and retailer. Conclude by having students write a definition and use each of the following words in a sentence: price, market, scarcity, nutrients, costs, profit.

TRANSFERRING KNOWLEDGE

Ask students to select a product in agriculture other than meat and make a production poster showing how their product goes from farm to table. Conclude by giving each student the opportunity to show the poster and explain briefly the production process involved.

COMPARING DATA AND DRAWING CONCLUSIONS

As a short homework assignment, ask the class to examine a processed meat package in their home. It might be bacon, hot dogs, sliced ham, bologna or sausage. Ask students to list the following information from the package label:

a) The product ingredients.
b) Government inspection information.
c) The product expiration date.
d) The place where the product was packaged.

The next day ask the students to compare the information they collected. Did all of the packages have inspection labels? Why? What is the purpose of listing ingredients? Why do some products have an expiration date? What ingredients are added to preserve the product's freshness and flavor? Conclude by asking students to locate the various cities where their product was packaged on a map of the United States.

EXTENSION ACTIVITIES
CONTINUED

IDENTIFYING BY-PRODUCTS
Divide the class into thirds and assign one group cattle, one group hogs and the third group sheep. Instruct each group to make a mural, a large poster or a diorama illustrating the by-products that come from their assigned animal. (The class could also be divided into fourths and the by-products of corn included. A few corn by-products are: noodles, particle board, cooking oils, soap, fertilizer, bread, starch, putty, cereals, shortening and cosmetics.)

Students can look for pictures, draw their own examples or bring actual samples of by-products to class. The cattle group, for example, could make a montage of jello boxes, buttons, leather belts and margarine boxes. Allow the groups several days to complete their projects and then have them share their projects with the class. Conclude by comparing the various by-products of cattle, hogs and sheep. Display the illustrations on the wall and discuss the many markets involved with the various by-products.

ANSWERS TO ACTIVITY AND EVALUATION SHEETS

MARKETS IN THE PRODUCTION OF MEAT/I-3

1. g	5. f
2. h	6. e
3. b	7. a
4. d	8. c

TRANSACTION CARDS/J-3

1.
The cost per pound.

2.
The average weight of the animal; i.e. the "feeder" calf weighs more after it becomes a "finished" steer.

3.
Because it's heavier.

4.
Because it has grown.

5.
Paid for the labor and the cost of feed.

6.
Beef is the edible part of the animal. Other things which make up the "live" weight of the animal (like hide, hair, bones, etc.), are by-products and used to make things other than meat.

7.
Due to cost of supplies and services required in each step in the production process.

8.
The packing plant owner earns additional money from the sale of the by-products (hides, bones, glands, etc.).

9.
The grocery store has to add its costs, such as labor (meat cutters, checkout men and women, janitors, etc.) and overhead (lighting, refrigeration, etc.).

10.
Possible answers:
A. Feed, veterinarians
B. Feed, labor, equipment
C. Transportation, labor
D. Labor, refrigeration, store overhead

EVALUATION SHEET/K-3

1. T	6. d
2. T	7. c
3. F	8. c
4. F	9. a
5. T	10. d

TEACHER'S GUIDE

4 SPECIALIZATION

OVERVIEW

The economic concept of specialization is developed in this guide. Lesson I and II are both designed to teach the three learning objectives for the unit so it is not necessary to use both. The extension activities are designed to reinforce the economic content presented in the lesson you choose. Using one of the major activities and two or three extension activities should require a maximum of three class periods.

ECONOMIC CONTENT

The major economic problem faced by all societies is scarcity. One way to minimize scarcity is through increased efficiency in the use of resources. Activities which increase efficiency include specialization and division of labor. Both specialization and division of labor result in interdependence.

Specialization occurs when countries, regions of countries or individuals confine their activity to one area or a limited number of areas. The United States produces grain, livestock, machine tools and manufactured goods but very little coffee, chocolate or bauxite. It can be said that some interdependence between countries occurs. The United States produces grain and sells it to Chile and Chile produces coffee beans and sells them to the United States. This specialization by countries is based on differences in geographic features of the two countries. Another reason for specialization by countries is the availability of resources. When countries specialize, they become interdependent. The United States depends on South America for coffee beans and South American countries depend on the United States for grain.

Specialization among regions within countries occurs just like specialization among countries. California, Texas and Florida produce most of the fresh citrus fruit, whereas states in the midwest produce most of the hogs. This specialization is based on differences in the climate of the states and the natural resources which are available. Most of the top 10 hog-producing states are in the corn belt. This specialization results from the avail-

ECONOMIC CONTENT CONTINUED

ability of feed which is needed to raise hogs (corn, other grains and soybeans). Regional specialization also leads to interdependence. The corn belt states depend on California, Florida and Texas for fresh fruit and these states depend on the corn belt states for grains and pork.

Specialization also occurs within jobs in the production process. This specialization is often referred to as division of labor. Division of labor breaks down the production process into a series of separate but interrelated jobs. Division of labor results in increased efficiency in production.

STUDENT OBJECTIVES

FOR GUIDE 4

The learner will be able to:
- identify two specialized types of work within the meat production stages.
- give one example of interdependence which results from specialization.
- identify one reason for regional specialization of meat production.

LESSON I

SPECIALIZATION IN PRODUCTION

KIT MATERIALS REQUIRED
Activity Masters for Guide 4:
JIM'S JOURNEY/L-4
EVALUATION SHEET/N-4

KEY WORDS
(See Glossary, Teacher's Guide I, page 17 for definitions.)
By-product
Cow-calf operation
Feeder
Feedlot
Finishing
Graze
Interdependence
Packing plant
Tannery
Slaughter
Soybean

SUGGESTED TEACHING TIME
(Two class periods)

DEVELOPING THE LESSON
If desired, pretest, using **EVALUATION SHEET/N-4.** Distribute copies of **JIM'S JOURNEY/L-4.** Review key words and then allow the class time to read the material (silently or aloud). When they have finished, list the different locations mentioned in the story on the chalkboard. Ask students to locate the areas mentioned on the wall map and identify what climate and terrain would be found there. Compare and contrast the area around the Wright ranch to the area around the Franklin's farm. Ask a student to locate Des Moines, Iowa. Discuss why it's a good location to establish a packing plant. Conclude this part of the lesson by asking the students to imagine they are Jim and write a letter home telling their family about the trip. (If time permits, have students share their letters.)

Continue the lesson by asking students to name the special jobs which exist in the meat industry. Have them name as many by-products of the industry as they can think of as well as additional jobs related to by-products. Use **EVALUATION SHEET/N-4** as a posttest.

LESSON II

INCREASING PRODUCTION THROUGH DIVISION OF LABOR

KIT MATERIALS NEEDED
Activity Master for Guide 4:
U.S. MAP/M-4
EVALUATION SHEET/N-4

KEY WORDS
(See Glossary, Teacher's Guide I, page 17 for definitions.)
Division of labor
Specialization
Assembly line
Mass production
Productivity
Invention
Entrepreneur
Manager

SUGGESTED TEACHING TIME
(One class period)

DEVELOPING THE LESSON
If desired, pretest, using **EVALUATION SHEET/N-4.** Duplicate the **U.S. MAP/M-4.** Tell the students that they will be assembling a map of the United States showing the states which rank first in production of cattle, hogs and sheep. Demonstrate the process they will be following:

1. Take a map of the United States off the pile.

2. Cut out the picture of the steer, the hog, the sheep and the title.

3. Glue the steer to Texas, the hog to Iowa and the sheep to Texas. Glue the title to the top of the page.

Choose three volunteers to make the maps. Place all materials on a table in front of the room. Make sure there are three pairs of scissors and three glue sticks on the table. Explain that each worker is to produce as many as possible by themselves. Allow the three students five minutes to complete the maps.

Count the total number of completed maps at the end of the time. Partially-completed maps are not to be counted. Collect the completed maps and place them in a box marked "products." Record the students' output on the chalkboard.

Choose three different volunteers to produce maps. Before they begin, separate the animal pictures section and the map label from the map and place in three piles. This time one student will cut out the animal pictures, one student will cut out the map label and one student will glue the pieces to the map. Allow students two or three minutes to get organized before they begin. Five minutes after they begin making maps, tally the number completed. Record the students' output next to that of team one. Students should now consider why the output of team two is different than that of team one (the specialization of team two should result in greater output).

Repeat the activity with four workers (team three). After recording the results for team three, discuss whether the output increased with the addition of the fourth worker. If possible, continue increasing the number of workers until a point is reached where the addition of workers does not result in an increased output (when the table gets crowded and/or there are not enough supplies). What innovations might help increase output? Is doing a specialized task more interesting than completing the map individually? (This may lead to a discussion of the advantages and disadvantages of the assembly-line process of production.) Use **EVALUATION SHEET/N-4** as a posttest.

BEST COPY AVAILABLE

EXTENSION ACTIVITIES

The extension activities are for review and reinforcement of the economic ideas associated with specialization (and interdependence).

Review livestock regions of the United States using activity in Teacher's Guide I, page 5.

COMPARING REGIONS

This activity focuses on the differences between South Central, North Central and Mountain regions of the country. Divide the class into three sections. Ask one group to choose the South Central region, one the North Central region and one the Mountain region of the country. Ask each group to present a fifteen-minute panel discussion about their region. The theme of the discussion is interdependence with the rest of the nation. The panel should focus its discussion on the geographic features of the region, the products it exports, the relation between its environment and its products, its imports and the way that particular region is mutually dependent on other regions of the nation. Encourage each group to use charts, maps and any other visual devices to illustrate the data they present. After each panel discussion, allow time for the class to ask questions. Use maps or other pertinent material in a bulletin board display featuring these three states.

RESEARCHING YOUR STATE'S ECONOMY

As a follow-up to the panel discussion in number 2, above, ask students to conduct research to learn about their own state's economy. The students may work in teacher-designated teams or individually. Some suggestions for topics are:

a) Climate and other geographic features.
b) Principal industrial products.
c) Agricultural products.
d) Trade and transportation.
e) State imports and exports.

When the research is completed, ask each individual or group to present their findings in oral reports. Discuss the findings. Emphasize the relationships between geography and agricultural products, natural resources and industrial products, trade and transportation and imports and exports. How do the state's climate, soil and other geographic features lend themselves to the kind of agriculture practiced in the state? In what agricultural products does it specialize? Are they exported from the state? How does that specialization create dependence on other states for agricultural products? Are they imported from other states?

Conclude by asking why a transportation network is a vital condition for the growth of a mutually-dependent group of states. Exhibit a state map and ask students to locate the main arteries running through the state. Explain why they are located where they are.

PINPOINTING INTERDEPENDENCE

Ask a student to trace a large outline map of the United States onto a sheet of mural paper. Tack the mural to the bulletin board. (A United States map would also work for this activity.) Ask each student to choose a city or rural area in their own state and identify a product produced in that city or rural area which another area of the country which specializes in livestock production would need or use. (If the students live in a livestock-producing area, have them choose another city or rural area of the nation which would need a livestock product.) Discuss why each city or area needs the product produced by the other city or area. Have each student make a label or draw a picture of the two products.

BEST COPY AVAILABLE

EXTENSION ACTIVITIES CONTINUED

Assign a different livestock-producing state to each student (see frames 109, 111 and 114 for a list of top cattle, hog and sheep production states).

Conclude by having the students take turns pinning the proper label on each location on the map and joining the pins with yarn. When all of the labels have been connected, discuss the complex interdependence of the nation's economy. If this activity were repeated for all the states, what would the map look like? Why does it show the necessity for transportation systems to make that interdependence possible?

LEARNING MORE ABOUT LOCAL SURROUNDINGS

Invite the local agricultural extension agent to talk with the class about the county they live in. The focus should be on natural resources, conservation practices and agricultural products used in the region. Ask students to prepare questions the night before the guest speaker's visit.

REVIEWING OR INTRODUCING CAREER CLUSTERS

Explain that the farmer/rancher makes possible many different jobs for other people. Using the **PARTNERS IN PRODUCTION** poster, have students identify the job represented by each person in the picture.

Review or introduce career clusters (agribusiness/natural resources, business/office, communications/media, construction, consumer/home economics education, environment, fine arts/humanities, health, hospitality/recreation, manufacturing, marketing/distribution, personal services, public service, transportation).

Have students examine each picture on the poster and determine which cluster the worker in the picture is part of. Follow up discussion by having students pick one picture and come up with a list of other jobs which the person in the picture makes possible, e.g. a mechanic—the people who make the tools he is using; the woman loading hay—the people who make the gloves she is wearing, etc.

ANSWERS TO EVALUATION SHEET

EVALUATION SHEET/P-4

1. T	6. T
2. F	7. c
3. F	8. b
4. F	9. c
5. F	10. d

BEST COPY AVAILABLE

VOCABULARY/A-1

1. **auction:** a public sale of items to the highest bidder
2. **capital:** machinery, tools, factories and other physical property used in the production of goods
3. **demand:** the ability, desire and willingness to buy goods and services
4. **factors of production:** resources required for the production of all goods and services; the four general classifications are land resources, labor resources, capital resources and management resources (usually called entrepreneurship).
5. **feedlot:** a place where the final growing, weight gain and finishing take place in livestock production before animals are sold to packers
6. **finishing:** feeding an animal to achieve desired market weight
7. **frontier:** a new and mostly unexplored, undeveloped and unsettled area of land
8. **genetics:** the science of how genes affect the origin or development of something or someone
9. **hog:** a pig, especially a full-grown, domesticated pig
10. **livestock:** farm animals such as cattle, hogs, sheep or horses raised for sale or for home use
11. **manager:** the owner, or person hired by the owner, to operate the business
12. **market:** wherever the buying and selling of goods and services takes place
13. **pasture:** grasses or other vegetation eaten by grazing animals
14. **processor:** a middleman who prepares products for retail sale
15. **profit:** the difference between the selling price of goods and their actual cost; the net income, or amount of money left, after all the costs have been subtracted
16. **ruminant:** cud-chewing animals with a four-compartment stomach such as cattle and sheep; microorganisms in their rumen (one of the compartments) assist them in the digestion of fiber and conversion of it to high quality protein
17. **specialization:** concentration of effort in a particular aspect of production

USING VOCABULARY Directions: Write a sentence using each vocabulary word listed below. You may use your vocabulary list or a dictionary to help you.

ACRE: On our farm, we grow 500 acres of corn each year.

BY-PRODUCTS:

CONSUMER:

FEEDLOT:

FERTILE:

MANAGER:

PRODUCER:

RANGE:

RESOURCES:

RETAILER:

SALT PORK:

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

WORD SEARCH PUZZLE/B-1

Directions: Find and circle the four factors of production in the word puzzle below. Using these words as headings, label each column. Then, find at least five examples of each category, circle the words and list them under the correct heading. Words may go up, down, across and backwards; there are no diagonals.

L	M	A	N	A	G	E	M	E	N	T	A	B	C	F	E	D	G	R	I	S	K	V
A	H	I	J	K	F	A	R	M	E	R	L	M	A	N	O	R	S	I	L	O	A	E
B	B	M	I	N	E	R	A	L	S	C	A	B	P	Q	R	S	S	S	E	E	R	T
O	A	Y	W	Q	R	M	A	R	K	E	T	L	I	G	R	A	S	S	C	S	E	E
R	U	P	T	R	T	A	B	N	M	T	R	E	T	A	I	L	E	R	X	C	P	R
D	C	T	D	F	I	U	E	Y	I	A	M	S	A	L	F	E	E	D	E	R	E	I
E	T	P	W	R	L	I	N	H	N	M	E	O	L	A	N	D	P	O	I	J	E	N
C	I	R	W	E	I	U	I	T	R	A	O	A	S	B	U	Y	E	R	D	R	N	A
I	O	E	D	T	Z	Y	C	J	U	S	I	P	R	O	C	E	S	S	O	R	O	R
S	N	H	E	R	E	Y	I	O	N	K	C	J	P	R	O	F	I	T	M	K	I	I
I	E	T	A	U	R	P	D	L	D	A	I	R	R	I	G	A	T	I	O	N	T	A
O	E	A	B	C	I	O	E	R	S	U	N	S	H	I	N	E	A	O	V	O	C	N
N	R	E	D	K	K	L	M	E	O	F	E	E	D	A	P	I	N	N	R	A	B	F
S	T	W	A	T	E	R	A	B	S	O	I	L	T	R	A	C	T	O	R	T	A	G

LAND			
1 **water**	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

EVALUATION SHEET/C-1

For Use With
Teacher's Guide 1

For the following six questions:
Mark "T"—If answer is **TRUE**
"F"—If answer is **FALSE**

_____ 1. The United States government encouraged people to settle the frontiers by providing them with inexpensive land.

_____ 2. A farmer needs four resources—land, labor, capital and management in order to run a successful production business.

_____ 3. Farmers do not depend on resources outside of their own farms.

_____ 4. The parts of an animal that are not used for meat are thrown away.

_____ 5. The price a consumer, processor or retailer will pay for beef is dependent on supply and demand.

_____ 6. More cattle are raised in the western part of the United States than in the eastern part.

For Questions 7-10, mark the letter of the best answer on the line beside the number.

_____ 7. In the 1800's, the need to move livestock from where they were grown to where they could be sold led to the development of
a. the automobile.
b. railroads.
c. highways.
d. more farmers and ranchers.

_____ 8. Everyone in your classroom today is involved in the meat production business as a
a. producer.
b. processor.
c. consumer.
d. retailer.

_____ 9. The raising and finishing of livestock is the job of the
a. producer.
b. processor.
c. consumer.
d. retailer.

_____ 10. Livestock producers and managers take the risks involved in farming and ranching because they are motivated by
a. specialization.
b. profit.
c. fresh air.
d. food.

FACTORS OF PRODUCTION/D-2

	LAND	LABOR	CAPITAL	MANAGEMENT
EXAMPLES:				
DEFINITIONS:				

NAME _____ DATE _____ 41

TEACHER'S GUIDE 2 ACTIVITY MASTER

PROFIT OR LOSS?/E-2

Directions: Pick any three years and circle the number. Write the three numbers in the center box. Refer to Profit or Loss Situations Sheet. Your teacher will give you remaining instructions.

YEAR 1	YEAR 2	YEAR 3
Sales $_____	Sales $_____	Sales $_____
Costs $_____	Costs $_____	Costs $_____
Profit - or - Loss?	Profit - or - Loss?	Profit - or - Loss?
YEAR 4	Sales / Costs	**YEAR 5**
Sales $_____	**YEAR #** _____ _____	Sales $_____
Costs $_____	**YEAR #** _____ _____	Costs $_____
Profit - or - Loss?	**YEAR #** _____ _____	Profit - or - Loss?
	Total _____ _____	
	Did you make a profit or loss for the three years?	
	How much profit or loss did you make?	
	How much was your average profit or loss?	
YEAR 6	**YEAR 7**	**YEAR 8**
Sales $_____	Sales $_____	Sales $_____
Costs $_____	Costs $_____	Costs $_____
Profit - or - Loss?	Profit - or - Loss?	Profit - or - Loss?

43

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

NAME DATE 42

PROFIT OR LOSS SITUATIONS/F-2

YEAR 1: You have a nice herd of feeder calves and expect a good year. Two weeks before marketing, ten steers catch a disease and die. Your sales are $178,000. Your expenses are $165,000.

YEAR 2: Consumers are demanding more pork than they purchased last year, but farmers are raising fewer hogs. The price you get for your hogs is high. Your sales are $192,000. Your expenses are $160,000.

YEAR 3: The United States government has stopped the shipment of grain to a foreign country. Your sales are $170,000. Your expenses are $166,000.

YEAR 4: A drought occurs in the midwestern states and your yield is cut by one third. Your sales are $150,000. Your expenses are $160,000.

YEAR 5: Consumers want more beef and pork than last year and many farmers are raising more cattle and hogs. Your sales are $188,000. Your expenses are $160,000.

YEAR 6: You must replace a tractor. Your sales are $185,000. Your expenses are $200,000.

YEAR 7: You begin using a new fertilizer which increases the bushels per acre of corn you produce. With more of your own corn, it won't be necessary to buy as much feed for your livestock. Your sales are $185,000. Your expenses are $150,000.

YEAR 8: The owner of some land you rent has raised the rental price of the land. The cost of fuel and feed has also gone up. Your sales are $185,000. Your expenses are $180,000.

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

NAME DATE 43

TEACHER'S GUIDE 2 ACTIVITY MASTER

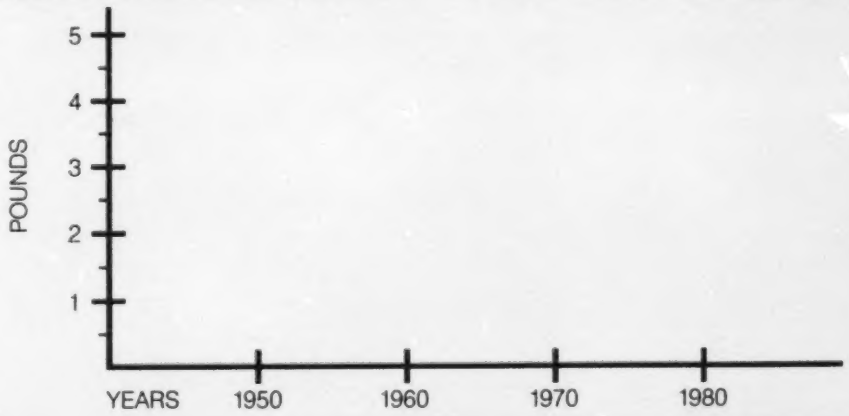
MAKING A GRAPH/G-2

Directions: Complete each exercise below by graphing the information given. For exercise b you will need to label the vertical and horizontal axes before graphing the information given. For exercise c you will need to design your own graph.

a

Per Capita Lamb Consumption (Retail Weight Basis)

1950 . . . . . (Not available)
1960 . . . . . 4.3 lbs.
1970 . . . . . 2.9 lbs.
1980 . . . . . 1.3 lbs.



b

Lamb Production (Meat)

1950 . . . . . 597,000,000 lbs.
1960 . . . . . 768,000,000 lbs.
1970 . . . . . 551,000,000 lbs.
1980 . . . . . 318,000,000 lbs.

c

Lamb Prices Received by Farmers, U.S. Averages for All Grades, Dollars Per 100 Pounds

1950 . . . . . $25.10 per 100 lbs.
1960 . . . . . 17.90 per 100 lbs.
1970 . . . . . 26.40 per 100 lbs.
1980 . . . . . 63.60 per 100 lbs.

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD.** This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

NAME _____ DATE 44

EVALUATION SHEET/H-2

For Use With
Teacher's Guide 2

For the following five questions:
Mark "T"—If answer is **TRUE**
"F"—If answer is **FALSE**

_____ 1. If a farmer or a rancher feels that there are some risks involved, he will decide to not enter the livestock production business.

_____ 2. Migrant workers and veterinarians are examples of labor resources.

_____ 3. A farmer must make numerous decisions which affect his profit or loss.

_____ 4. Economists divide all resources into three factors of production: land, labor and capital.

_____ 5. A farmer can minimize risks and thereby increase his potential profits by good record-keeping and management.

For Questions 6-10, mark the letter of the best answer on the line beside the number.

_____ 6. One example of a CAPITAL RESOURCE is
a. a tractor.
b. the manager.
c. water.
d. a veterinarian.

_____ 7. One example of a LAND RESOURCE is
a. rain.
b. a silo.
c. livestock.
d. fertilizer.

_____ 8. Two things that can greatly affect the profits of a farmer or rancher are
a. prices and cattle trails.
b. weather and disease.
c. risk and reward.
d. by-products and feedlots.

_____ 9. In order for a farmer to make a profit, his income (sales) must be greater than his
a. rent.
b. risk.
c. costs (expenses).
d. salaries.

_____ 10. A person might choose to go into the farming business because
a. he enjoys making his own decisions.
b. he is guaranteed a large income each year.
c. he doesn't have to work in the winter.
d. he lives in New York.

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

NAME _____ DATE 45

TEACHER'S GUIDE 3 ACTIVITY MASTER

MARKETS IN THE PRODUCTION OF MEAT/1-3

Directions: Cut out the transaction market boxes at the bottom of this sheet. Determine which two specialized workers might be involved in the transaction/market described in each box. Match, then glue each transaction box on the appropriate space.

SPECIALIZED WORKER	TRANSACTION MARKET	SPECIALIZED WORKER
1. processor		dog food company representative
2. wholesale meat broker		restaurant operator
3. farmer		veterinarian
4. grain elevator operator		feedlot operator
5. rancher		hardware store clerk
6. caterer		meat cutter
7. processor		shoemaker
8. feedlot operator		trucker

TRANSACTION/MARKET BOXES

a hide is sold for tanning to make leather	**b** hogs are vaccinated to prevent disease	**c** services of a trucker are purchased for transporting cattle to a packing plant
d grain is sold for finishing cattle	**e** pork chops are purchased for small dinner party	**f** fencing materials are purchased to repair broken fence
g meat by-products are sold for canning	**h** 150 pounds of sirloin steak is sold	

47

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

TRANSACTION CARDS/J-3

Directions: Fill in the total cost on the blank line in each of the four boxes.

Next, compare the information in each box and answer questions 1-10 below on a separate sheet of paper.

You are a buyer for a feedlot operator. You pay the rancher who raised the animals 65¢ per lb. for feeder calves.

cost per lb. . . . . $ .65
average weight of feeder calves . . . . . 700 lbs.
Total cost per calf . . . . . $_____

CARD A

You are a buyer for a meat packing (processing) plant. You pay the feedlot operator 65¢ per lb. for finished steers (formerly feeder calves).

cost per lb. . . . . $ .65
average weight of finished steer . . . . . 1050 lbs.
Total cost per steer . . . . . $_____

CARD B

You are a retail store buyer. You pay the packing plant $1.10 per lb. of beef.

cost per lb. $1.10
average amount of wholesale beef per steer . . . . . 646 lbs.
Total cost of beef . . . . . $_____

CARD C

You are a consumer. You pay the grocery store or supermarket $1.95 per lb. for beef.

average cost per lb. $1.95
average amount of retail meat per steer . . . . . 454 lbs.
Total cost of retail meat . . . . . $_____

CARD D

1. What is the same between card **A** and **B**?
2. What is the difference between card **A** and **B**?
3. Why is the total cost of the animal higher in card **B** than card **A**?
4. Why is the average weight of the animal higher in card **B** than card **A**?
5. What has the person who fed the calves during finishing done to allow him or her to get more money for each animal than the farmer?
6. Why is the weight of the beef less than that of the "finished" steer?
7. Why did the price of the animal or meat increase on cards **B**, **C** and **D**?
8. If the packing plant owner buys a steer for $682 but only gets about $711 for the beef from the steer, why doesn't he or she loose money after paying overhead, etc.?
9. Why does the consumer pay more for beef than the retail store buyer?
10. The total cost at the bottom of each card is not the seller's profit. Profit is what remains after the costs of production have been paid for. Name at least two costs of production for each of the stages listed below.

Card No.	**Stage of Production**		
A	Newborn calf to feeder calf stage	1)_____	2)_____
B	Feeder calf to finished steer stage	1)_____	2)_____
C	Finished steer to wholesale cuts of beef	1)_____	2)_____
D	Wholesale cuts to retail cuts of beef	1)48	2)_____

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

NAME _____ DATE 47

EVALUATION SHEET/K-3

For Use With
Teacher's Guide 3

For the following 10 questions:
Mark "T"—If answer is **TRUE**
"F"—If answer is **FALSE**

_____ 1. Businesses must make profits if they are going to continue to provide goods and services for consumers.

_____ 2. When a person has clothes dry cleaned, the dry cleaner is a market.

_____ 3. In the meat production chain, the farmer is a processor.

_____ 4. A farmer participates in one market each year.

_____ 5. A restaurant is an example of a market that provides both goods and services.

For Questions 6-10, mark the letter of the best answer on the line beside the number.

_____ 6. The price of livestock or meat increases at each stage of production because
a. the animal is more mature.
b. of inflation.
c. the government requires a price increase.
d. a service is being provided.

_____ 7. "Price" is defined as
a. the amount left over after the cost has been subtracted.
b. the amount of items consumers are willing to buy.
c. the amount of money needed to buy a good or service.
d. the cost of producing an item.

_____ 8. The person whose main function is to grow or make things for sale is
a. a consumer.
b. a processor.
c. a producer.
d. a retailer.

_____ 9. The person who buys goods or services to use for his or her own needs is
a. a consumer.
b. a processor.
c. a producer.
d. a retailer.

_____ 10. Any place where buyers and sellers exchange goods or services is a
a. price.
b. demand.
c. supply.
d. market.

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

JIM'S JOURNEY/L-4

Jim Wright jumped out of bed and let loose a whoop. The big day had come at last. He was going to have the most exciting week of his life. Jim had never been east of his family's cow-calf ranch, located near Ft. Collins, Colorado, but now he was going to visit his aunt and uncle in Chicago, Illinois.

Jim had worked very hard last winter scooping out the deep snow and, as a reward, his dad had promised Jim this trip. Mr. Wright had said, "Jim, when our calves are ready to ship to the feedlot this year, you can ride with our trucker, Bob Morse to Columbus, Nebraska and then go on from there to visit Aunt Judy and Uncle Ken in Chicago."

When their family's calves weigh about 700 pounds, Jim's dad ships them to a feedlot where they are fed corn and roughages until they reach about 1050 pounds and are ready to go to the packing plant. Dick and Maggie Franklin had ordered this load. The Franklins, who are old friends of Jim's dad, grow corn and operate a feedlot in Nebraska. Bob Morse, an independent trucker who had hauled for Mr. Wright for many years, was taking the calves to the Franklin's feedlot. Jim's dad had made arrangements for Jim to ride part of the way to Chicago with Mr. Morse.

Jim ate a hasty breakfast while his dad and Mr. Morse loaded the calves into the truck. It was just after 7:00 a.m. when Bob closed the tailgate of the truck and said, "That's it, let's hit the road, Jim."

Bob and Jim headed north on Interstate 25 toward Cheyenne, Wyoming, until I-25 joined Interstate 80 going east. On I-80 they drove almost 450 miles across most of Nebraska to Columbus, which is just west of Omaha.

Time seemed to fly. Later, when Jim told his family about the trip, he said it was a jumble of changing countryside, truck stops and ribbons of highway. Late that evening, they pulled into the Franklin's farm just north of Columbus. Dick Franklin helped Jim down from the truck's cab. "Good to see you again, son," he said. "How was the trip?"

"Great," Jim said. "I can't believe it!! At home we have the mountains and our cattle are scattered over miles. Here it's so flat, I've never seen so many fields of corn in my life...and all the cattle are kept in big yards!"

Maggie Franklin agreed. "Your dad's rocky land is best for cattle grazing. Because our land has richer soil and gets more rain, it's better suited for growing grain. Therefore, it makes good sense for us to plant most of our ground in grain and run a feedlot. We all try to use our resources in the most efficient ways in order to make a profit."

Mr. Franklin added, "For beef to have the best taste, cattle should be fed mostly grain plus some roughages, such as hay and silage, during their last 300 to 400 pounds of growth. And because we don't want the animals to waste energy grazing on the open range, we keep them in big, fenced-in yards where they have easy access to feed."

Dick Franklin and Jim watched Bob back the semi-trailer up to the chute to unload. Maggie opened the end gate and the calves walked out of the truck, down the chute and into the yard.

Jim spent the night with the Franklins. The next day, Bob and Mr. Franklin loaded the truck again. This time they loaded "finished" cattle weighing about 1050 pounds that were ready to go to the packing plant in Des Moines, Iowa. The packing plant was only about 200 miles northeast of the Franklin's farm. Bob and Jim got an early start and were soon pulling into the plant's unloading docks.

As Bob waited his turn to unload, he pointed out different trucks parked in the yard. There were refrigerated trucks to haul the meat to retail stores. There was a tannery truck to haul hides away.

"The hides are used to make leather," Jim said, "but why is that truck from Apex Lab here? Don't they make soap and cosmetics?"

Bob answered, "Yes they do. All these things are made from cattle, hog and sheep by-products or parts of the animal that aren't meat, such as bones, hair, hooves and others.They also use various parts of the animal in making several kinds of medicines, buttons, sandpaper, hairbrushes, camera film and even violin strings!" Bob continued, "When we ate dinner at the Franklins' last night, the roast beef wasn't the only thing that came from cattle. The gelatin, the margarine, the marshmallows and the china plate were just a few things made, in part, from cattle by-products. That's why we see trucks here from many different kinds of businesses."

(over)

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

U.S. MAP/M-4

TOP CATTLE, HOG AND SHEEP PRODUCING STATES

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

EVALUATION SHEET/N-4

For Use With
Teacher's Guide 4

For the following 6 questions:
Mark "T"—If answer is **TRUE**
"F"—If answer is **FALSE**

_____ 1. Specialization of labor can be used to increase production.

_____ 2. All workers involved in the meat production chain handle some type of food item.

_____ 3. Graders and meat inspectors are specialized job examples of people involved in meat retailing.

_____ 4. Breeders and meat cutters are specialized job examples of people involved in meat processing.

_____ 5. People who live in cities need farmers to grow their food but farmers do not need anything from the city people.

_____ 6. The more labor is divided, the more specialization is required.

For Questions 7-10, mark the letter of the best answer.

_____ 7. In modern society most pople are
a. able to provide everything they want and need by themselves.
b. directly involved in the production of meat.
c. dependent on others to provide for their wants and needs.
d. not specialized in their occupation.

_____ 8. Cattle ranchers in Oklahoma are dependent on tire plant workers in Ohio for truck tires. Tire plant workers in Ohio are dependent on cattle ranchers in Oklahoma for meat. This is an example of
a. self-sufficiency.
b. interdependence.
c. retailing.
d. processing.

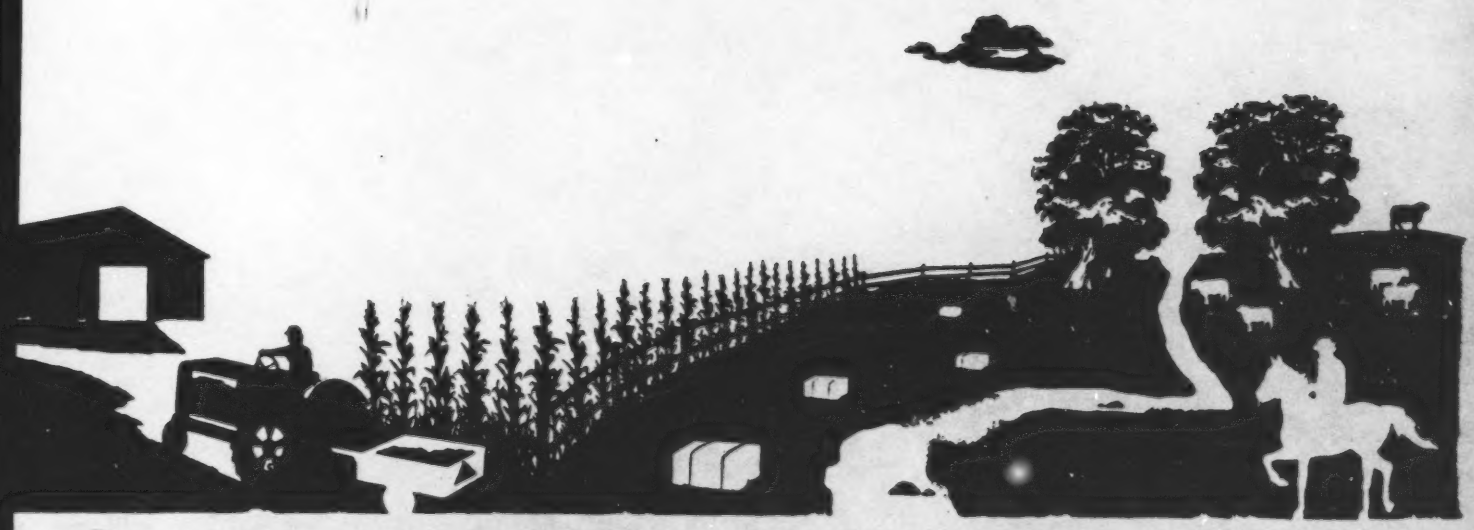
_____ 9. Two important reasons for regional specialization are
a. auctions and consumers.
b. managers and feedlots.
c. soil and climate.
d. labor and livestock.

_____ 10. The major stages of meat production in order of their occurrence are
a. processing, production, retailing.
b. production, retailing, processing.
c. retailing, production, processing.
d. production, processing, retailing.

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**. This sheet may be duplicated for classroom use. From *SHAPING A NATION*, kit #17-707.

Published by the
EDUCATION DEPARTMENT
NATIONAL LIVE STOCK AND MEAT BOARD
444 North Michigan Avenue
Chicago, Illinois 60611
(312) 467-5520

Developed with a Special Grant from the
NATIONAL LIVE STOCK PRODUCERS ASSOCIATION
Denver, Colorado



17-707 (TG) 48403

© 1984, **NATIONAL LIVE STOCK AND MEAT BOARD**, Chicago, IL 60611. From *SHAPING A NATION*, kit #17-707. LC. No. 83-730322